



SuZhou ZhongWei Photonics

- 公司介绍/Company Introduction
- 通讯滤光片/Optical Communication Filter
 - 数据中心/DATA CENTER
 - 传输网/TELECOM
 - *GFF
 - 接入网/ACCESS
 - 其他/OTHER

联系人/ Contact: 苏炎/Yan Su

联系电话/Phone: 15280167059

E-mail: yan.su@fb-phonic.com

苏州枫桥光电研究院•苏州众为光电有限公司

Suzhou Feng bridge Photonic Research Institute • Suzhou Zhongwei Photonics Co., Ltd

江苏省苏州市虎丘区枫桥街道向街 8 号

No.8 Xiangjie, Fengqiao Street, Huqiu District, Suzhou City, Jiangsu Province, China

目录

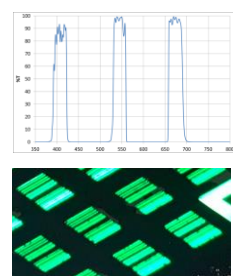
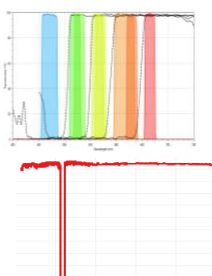
一、公司介绍/Company Introduction	3
二、通讯滤光片/Optical Communication Filter	4
【数据中心/DATA CENTER】	5
CWDM, Epoxy Type	5
LAN-WDM, Epoxy Type	6
【传输网/TELECOM – 5G】	7
MWDM.....	7
MWDM1271.....	9
LWDM.....	10
LWDM 650	11
【传输网/TELECOM】	12
DWDM.....	12
【传输网 – EDFA】	13
GFF 介绍	13
GFF 的参数定义.....	14
GFF 镀膜能力介绍/ GFF Coating ability	15
GFF2dB (21-40-0042-01)	16
GFF3dB (21-40-0005-01)	17
GFF3dB (21-40-0027-01)	18
GFF4dB (21-40-0020-01)	19
GFF4dB (21-40-0021-01)	20
GFF4dB (21-40-0028-01)	21
GFF4dB (21-40-0035-01)	22
GFF4dB (21-40-0037-01)	23
GFF4dB (21-40-0043-01)	24
GFF4dB (21-40-0055-01)	25
GFF5dB (21-40-0004-01)	26
GFF5dB (21-40-0016-01)	27
GFF5dB (21-40-0024-01)	28
GFF5dB (21-40-0039-01)	29
GFF5dB (21-40-0044-01)	30
GFF5dB (21-40-0056-01)	31
GFF6dB (21-40-0003-01)	32
GFF6dB (21-40-0011-01)	33
GFF6dB (21-40-0017-01)	34
GFF6dB (21-40-0046-01)	35
GFF6dB (21-40-0047-01)	36
GFF7dB (21-40-0015-01)	37
GFF7dB (21-40-0018-01)	38
GFF7dB (21-40-0023-01)	39

GFF7dB (21-40-0031-01)	40
GFF7dB (21-40-0038-01)	41
GFF8dB (21-40-0010-01)	42
GFF8dB (21-40-0026-01)	43
GFF8dB (21-40-0030-01)	44
GFF8dB (21-40-0040-01)	45
GFF8dB (21-40-0048-01)	46
GFF8dB (21-40-0050-01)	47
GFF8dB (21-40-0054-01)	48
GFF9dB (21-40-0014-01)	49
GFF9dB (21-40-0045-01)	50
GFF9dB (21-40-0053-01)	51
GFF10dB (21-40-0008-01)	52
GFF10dB (21-40-0032-01)	53
GFF10dB (21-40-0049-01)	54
GFF11dB (21-40-0022-01)	55
GFF11dB (21-40-0041-01)	56
GFF12dB (21-40-0052-01)	57
GFF13dB (21-40-0051-01)	58
【接入网/ACCESS】	59
2.5G_BPF1490	59
10G_BPF1577	60
BPF 1484-1598	61
G-PON 1310+1490	62
Combo_PON_SPF1280	63
Combo_PON_45D_T15R14	64
Combo_PON_44D_T14R13	65
Combo_PON_9.5D_T13R14	66
10G_OLT_T1577R1490_45deg	67
5G_T1309_R1295_45deg	68
PWDM	69
OTDR	70
50G_PON(Z-Block)LPF1335	71
50G_PON(Z-Block)BP1286	72
50G_PON(Z-Block)SPF1335	73
【其他】	74
XG-PON 1270+1577	74
NG-PON 1524-1544&1596-1603	75
Dual Band 1271&1311	76
DWDM1550-15D	77
TFF1064	78
SPF1570	79

一、公司介绍/Company Introduction

苏州众为光电有限公司是一家以生产光通讯高端光学薄膜产品为主的高科技公司。公司项目团队具有鲜明的技术特色和优势，核心成员均具有较强的专业知识背景、视野开阔、经验丰富，分别在工艺优化、产品设计、销售等方面拥有很强的专业背景。公司专注于光学薄膜产品的制造与服务，致力成为光学薄膜滤光片的全球领导者之一。

Suzhou Zhongwei Photonics Co., Ltd. is a high-tech company specializing in the production of high-end optical film products for optical communication. The project team of the company has distinct technical characteristics and advantages, and the core members all have strong professional background, broad vision, rich experience, and have strong professional background in process optimization, product design, sales and other aspects. The company focuses on the manufacturing and service of optical thin film products, and is committed to become one of the world leaders in optical thin film filters.

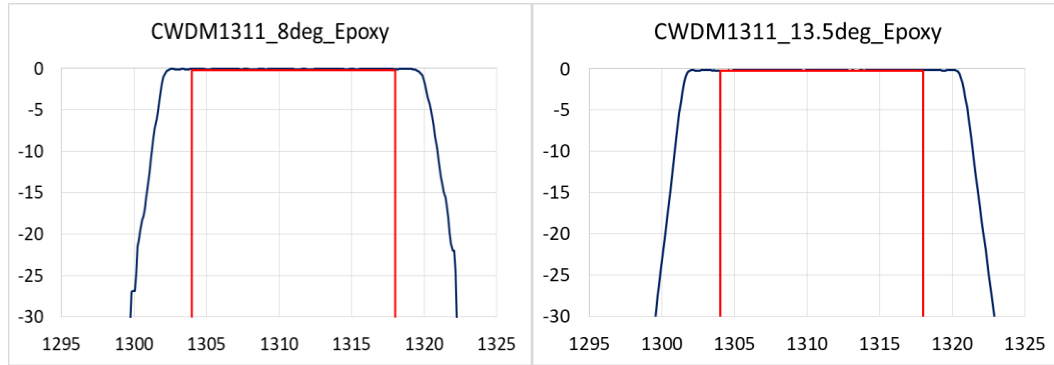


二、通讯滤光片/Optical Communication Filter

应用/Application	类别/Type	状态/Status
数据中心 /DATA CENTER	CWDM	可以覆盖全系列产品/Mass production
	LWDM	可以覆盖全系列产品/Mass production
传输网 /TELECOM	CWDM	可以覆盖全系列产品/Mass production
	MWDM	可以覆盖全系列产品/Mass production
	LWDM	可以覆盖全系列产品/Mass production
	DWDM	待量产/Waiting for Mass production
	WDM	可以覆盖全系列产品/Mass production
	*GFF	可以覆盖全系列产品/Mass production
接入网 /ACCESS	BiDi	可以覆盖全系列产品/Mass production
	GPON/CPON	可以覆盖全系列产品/Mass production
其他 /OTHER	XGPON	可以覆盖全系列产品/Mass production
	Dual Band	可以覆盖全系列产品/Mass production

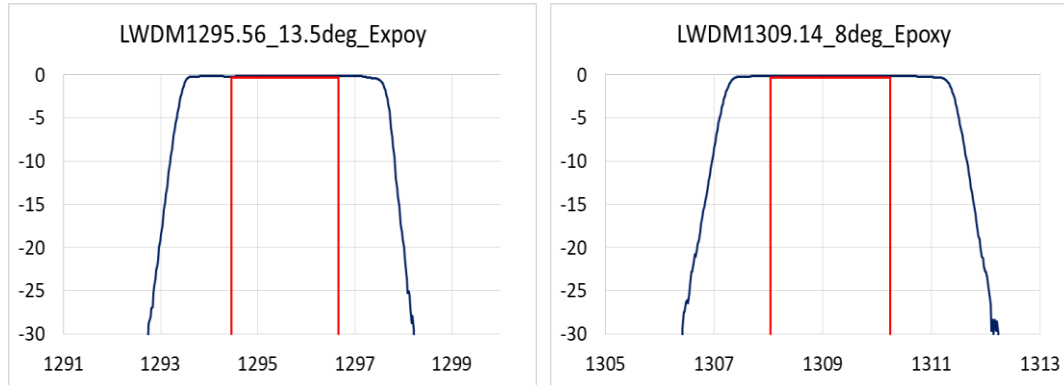
【数据中心/DATA CENTER】

CWDM, Epoxy Type



Parameters	Unit	Specifications	
		O Band	C Band
Operation Wavelength	nm	1260~1360	1460~1640
AOI in Air	degree	8, 13.5...etc	
AOI in Epoxy	degree	5.2, 8.7...etc	
Refractive index of Epoxy		1.51/1.55	
Center Wavelength @ 3dB	nm	1271/1291/1311/1331	1511/1531/1551/1571
Center Wavelength Tolerane	Nm	±1	
Pass Band Width @ 0.35dB	nm	≥ ±7.3	
Stop Band Width	nm	≤ ±12.7	
Transmission Isolation within Adjacent Channel	dB	≥ 30	
Max IL within PassBand	dB	≤ 0.35	
Ripple within PassBand	dB	≤ 0.3	
Reflection Isolation	dB	≥ 13.0	
Max IL within StopBand	dB	≤ 0.2	
Ripple within StopBand	dB	≤ 0.15	
PDL within PassBand	dB	≤ 0.1	
Reflection of Backside AR	%	≤ 0.2	
Size (Length*Width*Thickness)	mm	TBD	
Wedge Angle	degree	0	
Edge/Corner Chip	mm	≤ 0.1	
Scratch/Dig		40 / 20	

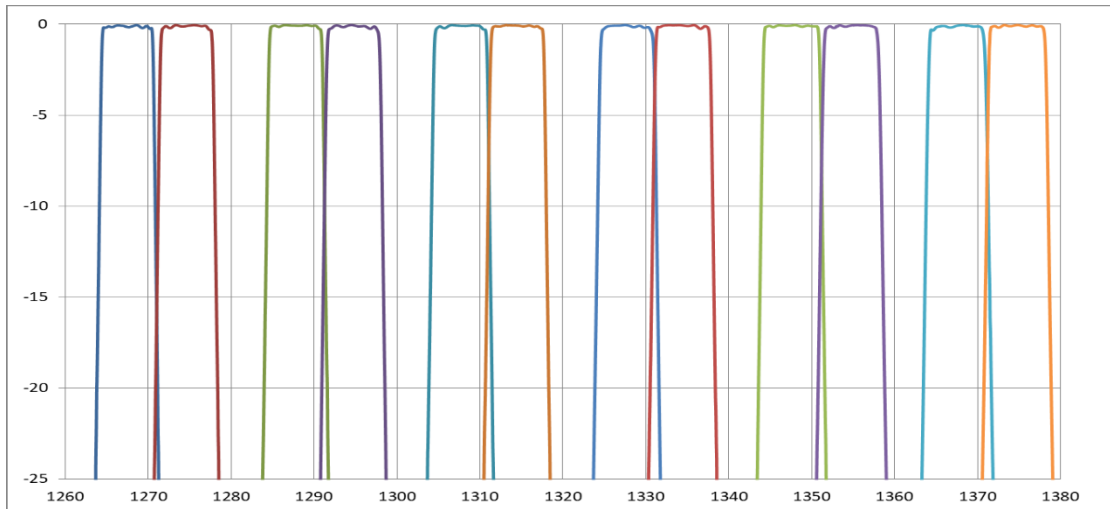
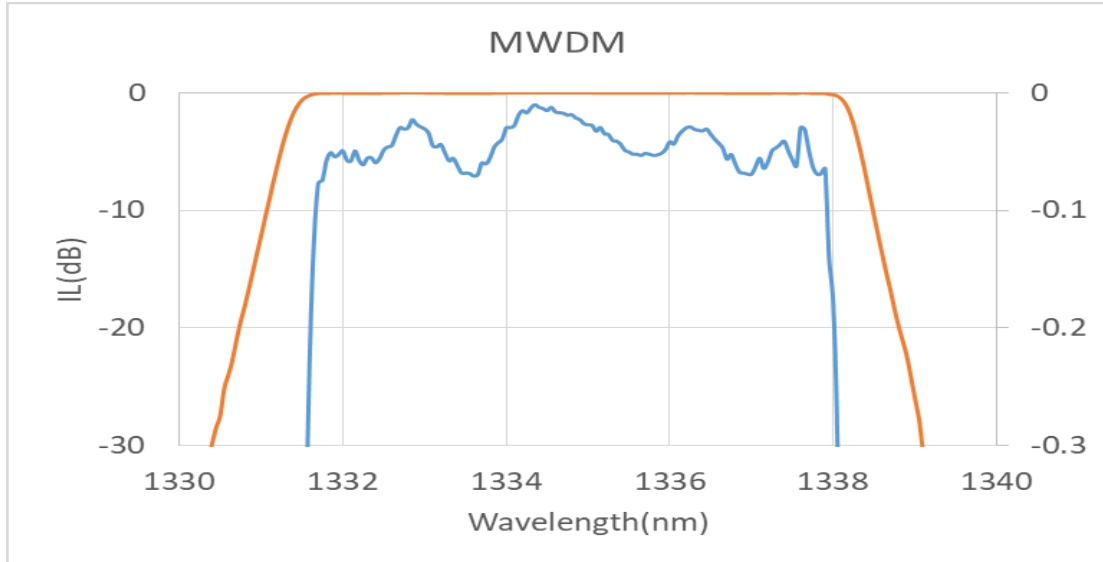
LAN-WDM, Epoxy Type



Parameters	Unit	Specifications
Operation Wavelength	nm	1280~1330
AOI in Air	degree	8, 13.5...etc
AOI in Epoxy	degree	5.2, 8.7...etc
Refractive index of Epoxy		1.51/1.55
Center Wavelength @ 3dB	nm	1273.54, 1277.89, 1282.26, 1286.66, 1295.56, 1300.04, 1304.58, 1309.14
Pass Band Width @ 0.35dB	nm	$\geq \pm 1.5$
Stop Band Width	nm	$\leq \pm 3$
Transmission Isolation within Adjacent Channel	dB	≥ 25 or 27
Max IL within PassBand	dB	≤ 0.55
Ripple within PassBand	dB	≤ 0.3
Reflection Isolation	dB	≥ 13.0
Max IL within StopBand	dB	≤ 0.2
Ripple within StopBand	dB	≤ 0.15
PDL within PassBand	dB	≤ 0.1
Reflection of Backside AR Coating	%	≤ 0.2
Size (Length*Width*Thickness)	mm	TBD
Wedge Angle	degree	0
Edge/Corner Chip	mm	≤ 0.1
Scratch/Dig		40 20

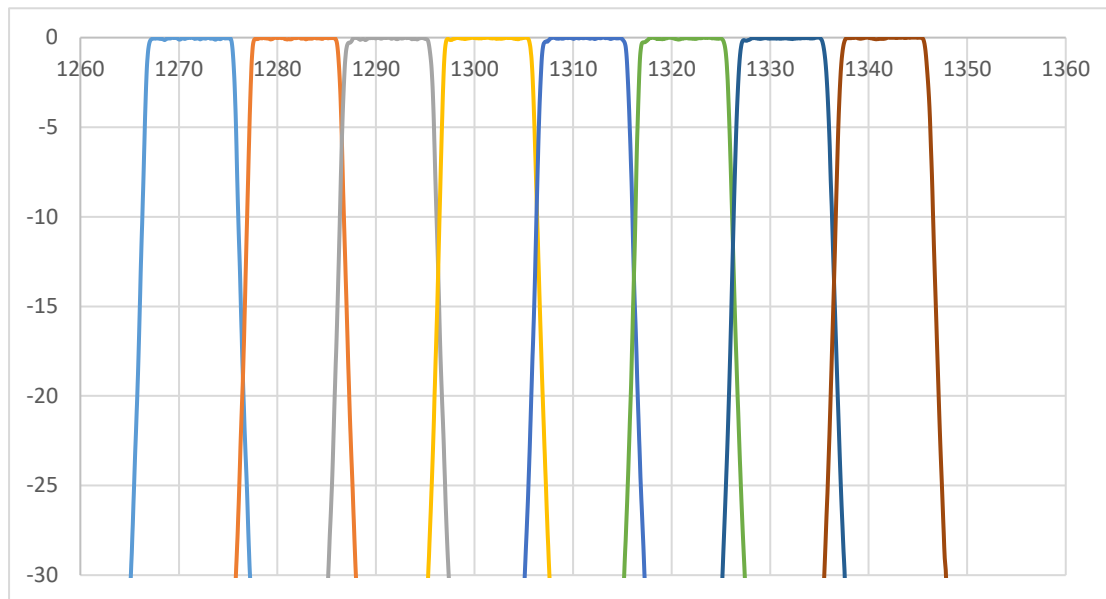
【传输网/TELECOM – 5G】

MWDM



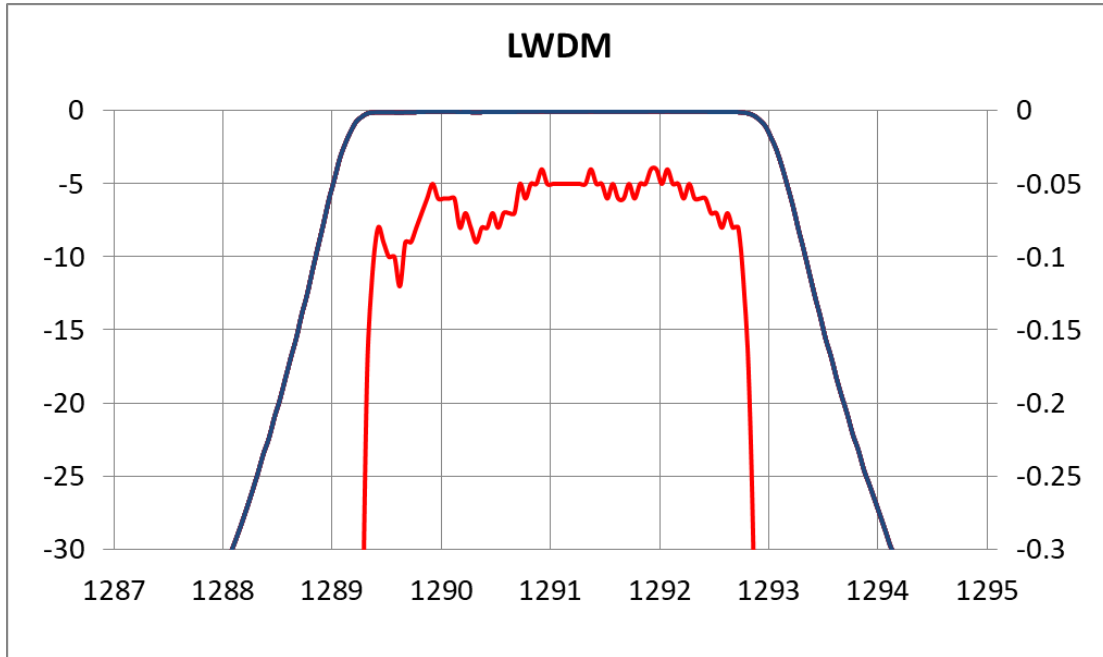
Parameters	Unit	Specifications
AOI in Air	degree	1.8
Center Wavelength @ 3dB	nm	1267.5/1274.5/1287.5/1294.5 /1307.5/1314.5/1327.5/1334.5 /1347.5/1354.5/1367.5/1374.5
Center Wavelength Tolerane(0 deg)	nm	0.3~0.7
Pass Band Width @ 0.35dB	nm	$\geq \pm 2.6$
Stop Band Width @26dB	nm	≤ 8.6
Isolation within Adjacent Channel	dB	≥ 26
Ripple within PassBand	dB	≤ 0.25
Size (Length*Width*Thickness)	mm	TBD
Wedge Angle	degree	0.2~0.6
Edge/Corner Chip	mm	≤ 0.1
Scratch/Dig		60 / 40

MWDM1271



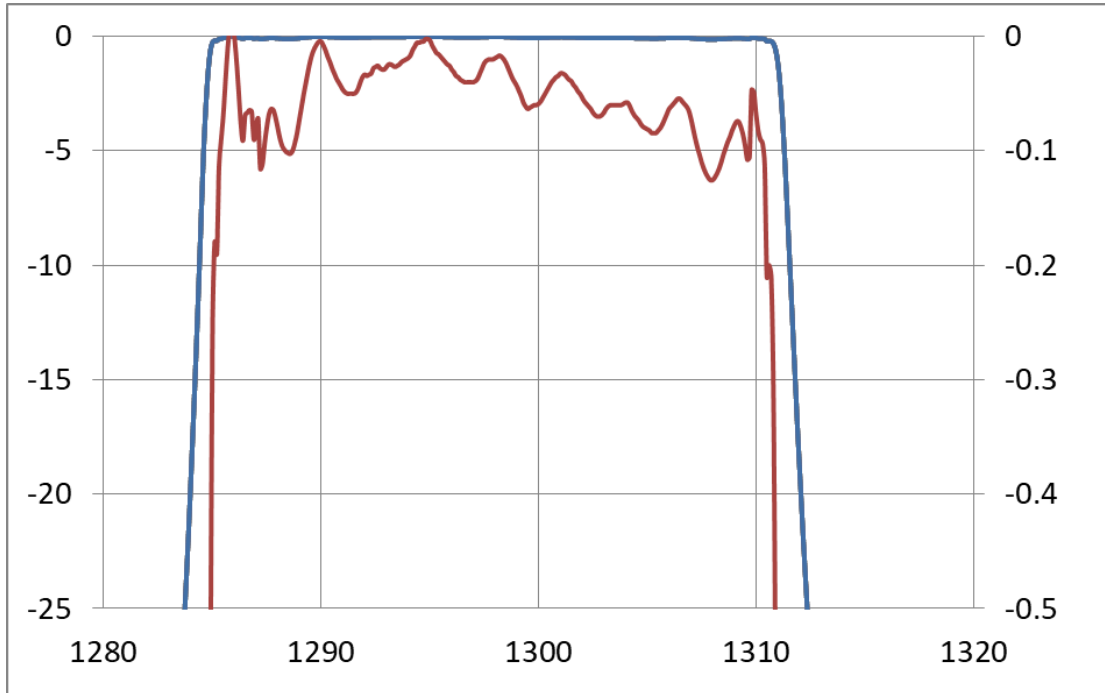
Parameter	Unit	Specifications
Filter Material		WMS-15
Angle of Incident	degree	13.5±0.1°
Center Wavelength @3dB	—	
Passband Width(PB)6nm	nm	6nm
Insertion Loss within c+(PB/2)	dB	≤0.4dB
Ripple Width Passband	dB	≤0.3dB
Transmission PDL within Ac+(PB/2)	dB	≤0.2dB
Adiacent Channel solation	dB	>30dB
λc temp.sensitivity	pm/°C	3pm/°C
Edge chipping	mm	≤0.1mm
Surface quality	μm/ unit silk	40/20
Filter wedge	degree	≤0.05°

LWDM



Parameters	Unit	Specifications
Operation Wavelength	nm	1260~1360
AOI in Air	degree	1.8
Center Wavelength @ 3dB	nm	1286.66/1291.1/1295.56 /1300.05/1304.58/1309.14
Center Wavelength Tolerane(AOI=0 deg)	nm	ITU+0.3
Pass Band Width @ 0.35dB	nm	$\geq \pm 1.3$
Stop Band Width @26dB	nm	≤ 6.6
Transmission Adjacent Channel Isolation	dB	≥ 30
Max IL within Pass Band	dB	≤ 0.35
Ripple within Pass Band	dB	≤ 0.25
Reflection Isolation	dB	≥ 13.0
Max IL within Stop Band	dB	≤ 0.2
Ripple within Stop Band	dB	≤ 0.15
Polarization Dependent Loss	dB	≤ 0.1
Reflection of Backside AR Coating	%	≤ 0.2
Size (Length*Width*Thickness)	mm	1.2*1.2*1(-0.1/+0.4)
Wedge Angle	degree	0.2~0.6
Edge/Corner Chip	mm	≤ 0.1
Scratch/Dig		60 / 40

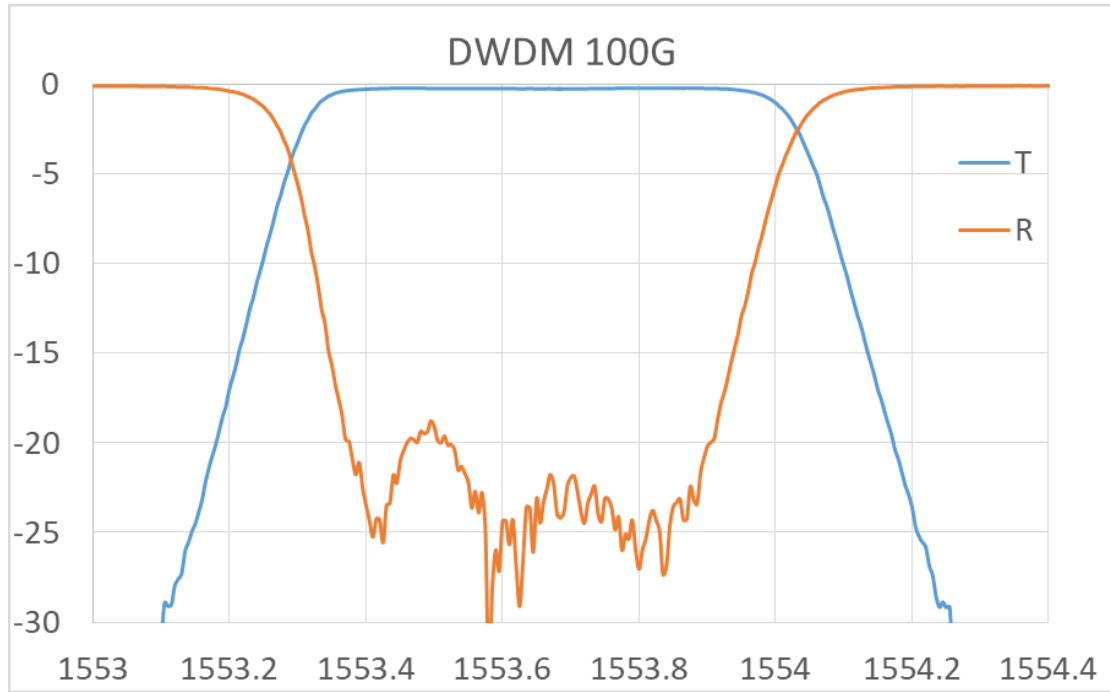
LWDM 6S0



Parameters	Unit	Specifications
Operation Wavelength	nm	1260~1640
AOI in Air	degree	1.8
Center Wavelength @ 3dB	nm	1297.9
Pass Band WL Range	nm	1285.31~1310.49
Reflect Band WL Range	nm	1260~1283.47&1312.44~1640
Pass Band Width @ 0.25dB	nm	$\geq 25.18 (\pm 12.59)$
Stop Band Width @25dB	nm	≤ 28.97
Adjacent Channel	dB	≥ 25
Ripple within Pass Band	dB	≤ 0.25
Reflection Isolation	dB	≥ 13.0
PDLwithin Pass Band	dB	≤ 0.1
Reflection of Backside AR Coating	%	≤ 0.2
Size (Length*Width*Thickness)	mm	1.4*1.4*1(-0.1/+0.4)
Wedge Angle	degree	0.2~0.6
Edge/Corner Chip	mm	≤ 0.1
Scratch/Dig		60 / 40

【传输网/TELECOM】

DWDM



Parameters	Unit	Specifications
Operation Wavelength	nm	1520~1580
AOI in Air	degree	1.8
Channel Spacing	GHz	100
Center Wavelength @ 0.5dB @0deg	nm	ITU+0.3 ~ ITU+0.7
Channel Pass band	nm	±0.15
Pass Band Width @ 0.5dB	nm	≥0.43
Stop Band Width @28dB	nm	≤ 1.2
Adjacent Channel	dB	≥ 28
Ripple within Pass Band	dB	≤ 0.3
Reflection Isolation	dB	≥ 13.0
PDL within Pass Band	dB	≤ 0.1
Reflection of Backside AR Coating	%	≤ 0.2
Size (Length*Width*Thickness)	mm	1.4±0.1 * 1.4±0.1 * 1.2±0.2
Wedge Angle	degree	0.2~0.6
Edge/Corner Chip	mm	≤ 0.1
Scratch/Dig		60 / 40

【传输网 – EDFA】

GFF 介绍

增益平坦滤光片 (Gain Flattening Filter) 简称 GFF。通常, GFF 与增益放大器一起使用, 以确保放大通讯通道都具有相同的信号增益。GFF 的特征在于它们的“峰-峰误差函数”(Peak to Peak Error Function: PPEF), 它用来衡量 GFF 光谱特性与期望的目标曲线的接近程度。众为制造的 GFF 能对付最具挑战性的参数要求。

Gain Flattening Filter(GFF) is usually used in conjunction with EDFA to ensure that the amplification communication channels all have the same signal gain. GFFs are characterized by "Peak to Peak Error Function" (PPEF), which measures how close the spectral properties of the GFF are to the desired target curve. The custom-built GFF is designed to handle the most challenging parameter requirements.

众为的独特设计和镀膜技术成就了超越传统的增益平坦滤光片 GFF, 可以覆盖过去二十年所出现的数百种不同目标曲线的 GFF, 从简单的抛物线形状到非常困难的具有高调制深度和陡峭斜率的形状。此外, 众为的 GFF 设计还提供可以附加类似带通滤光片功能的 GFF。例如, GFF 可以用来阻隔泵浦激光源, 使得光放大器不再需要额外的滤光片。

Our unique design and coating technology allow us to go beyond the traditional gain flat filter GFF to cover hundreds of different target curves that have emerged over the past two decades, from simple parabolic shapes to very difficult shapes with high modulation depths and steep slopes. In addition, Zhongwei's GFF design also provides a GFF that can be attached with functions similar to a bandpass filter. For example, the GFF can be used to block the pumped laser source, eliminating the need for additional filters for optical amplifiers.

GFF 的参数定义

ILmin(dB): 目标 GFF 曲线中的最小插损。

ILmin or ILex: Peak insertion loss is the value of maximum transmission within a specified range.

ILtgt(dB): 目标 GFF 曲线中的插损。

ILtgt(dB): Insertion loss in target GFF spectrum as specified.

调制深度定义为在目标 GFF 曲线中波长范围内的最大插损与最小插损之间的差值。

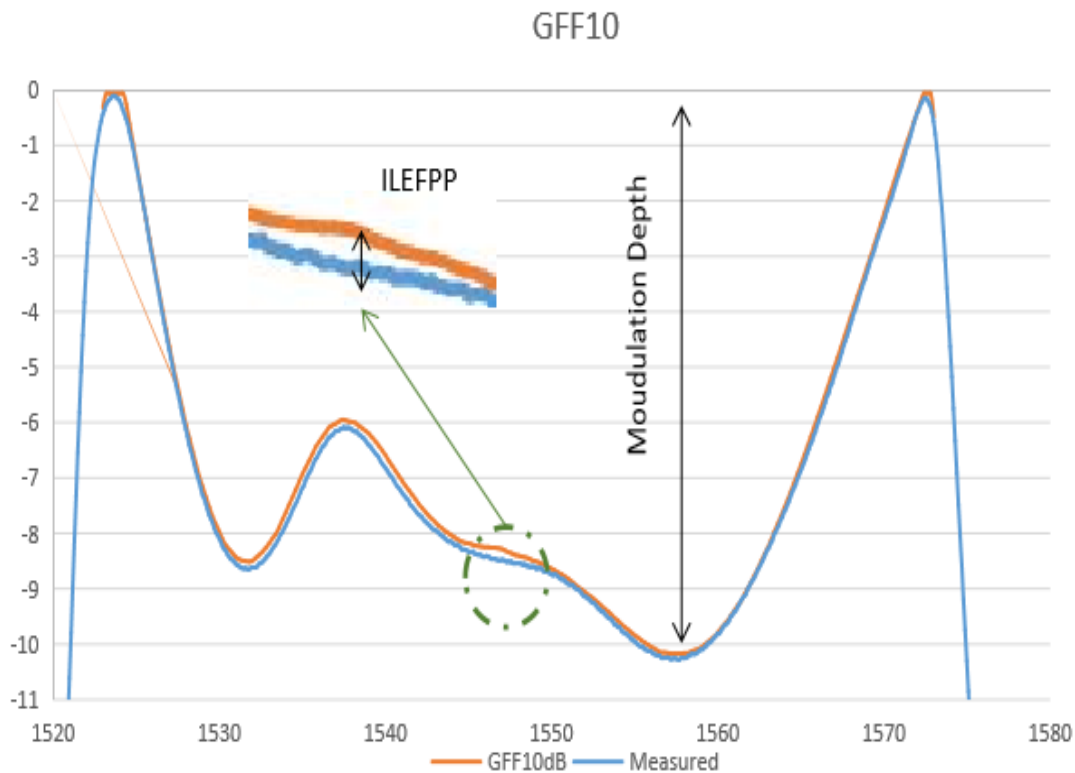
The modulation depth is defined as the difference between the maximum transmission (TMax) [dB] and the minimum transmission value (TMin) [dB] within the target GFF spectrum.

Error Function 误差函数 (dB): 目标曲线对应波长的实测 IL 与目标 ILtgt 和 ILmin 之间的差值定义了误差函数 (EF), 即, $EF(dB) = IL - ILmin - ILtgt$

Error Function: The difference between the measured (TMeasured) [dB] and target (TTarget) [dB] transmittance points on the gain equalizing curve defines the error function (EF).

峰-峰误差函数 (PPEF / EFp-p): 定义为最大误差函数 (EF 最大值) 和最小误差函数 (EF 最小值) 之间的差值, 即, $EFp-p = \max(EF) - \min(EF)$

The peak-to-peak error function (PPEF) is a single valued specification defined as the difference between the maximum error function (EFmax) and the minimum error function (EFmin).



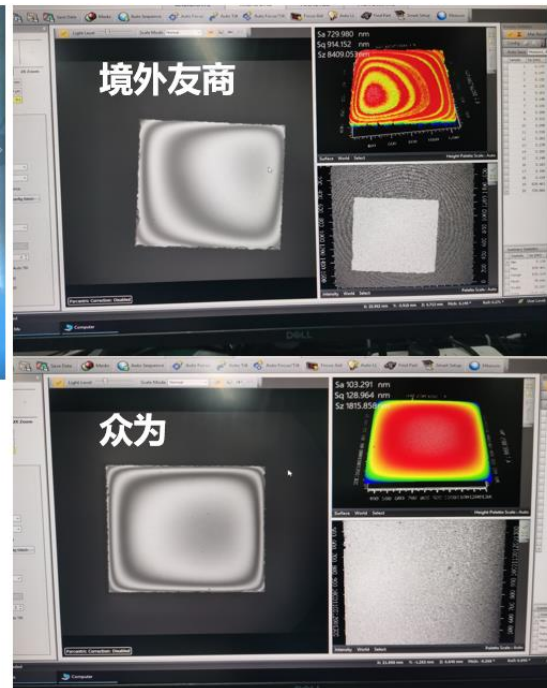
GFF 镀膜能力介绍/ GFF Coating ability

目标曲线的调制深度超过 6dB/Modulation depth greater than 6dB

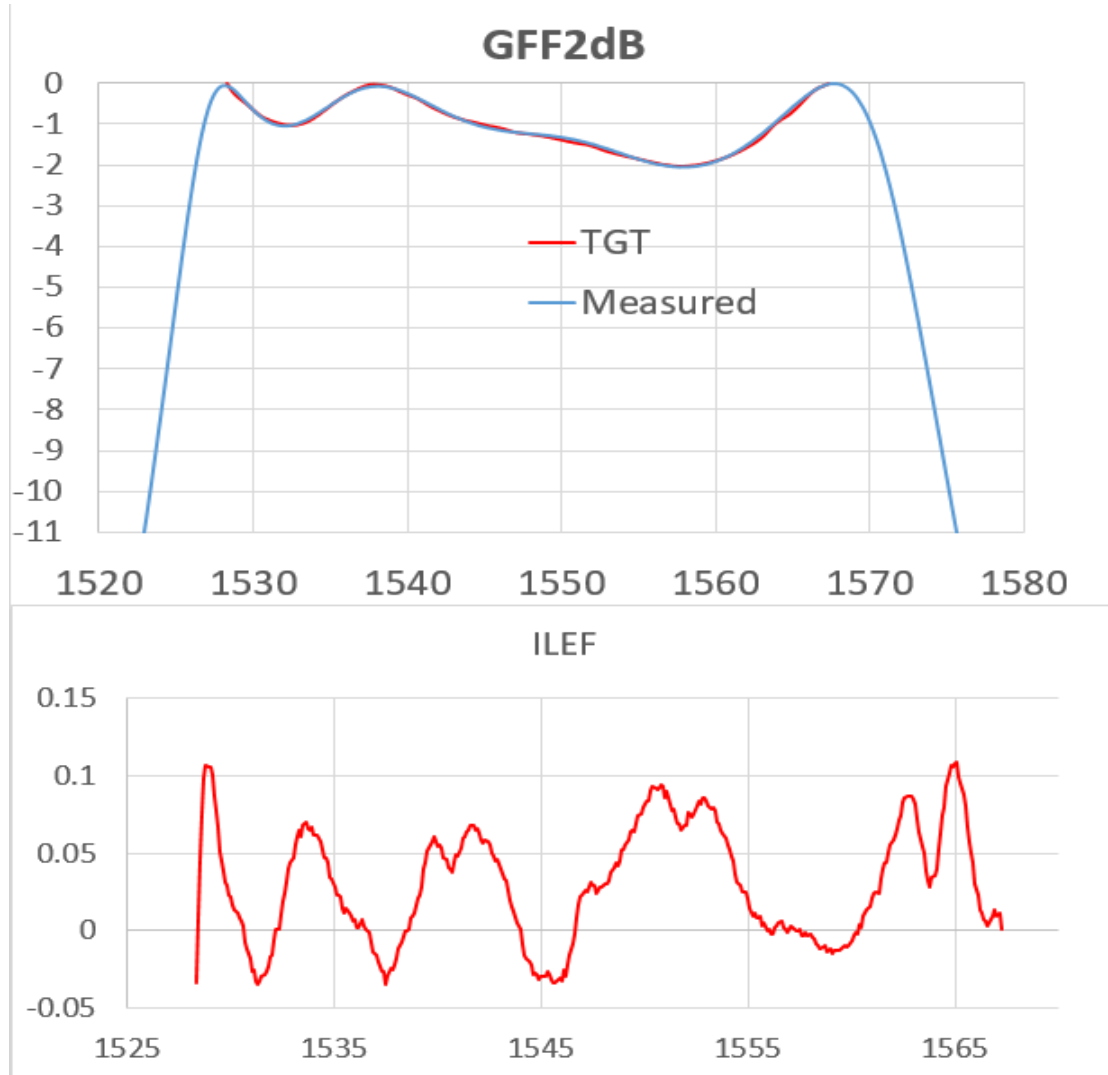
GFF	调制深度/ Modulation depth	波长范围 /WL Range	ILEFPP(dB)	SPEC(dB)
GFF6A	6dB	1528.6-1567.8	0.189	<0.25/0.4
GFF6B	6dB	1524-1573	0.303	<0.4
GFF6L*	6dB	1575.2-1617.6	0.298	<0.4
GFF7	7dB	1524-1573	0.235	<0.4
GFF7B*	7dB	1524-1573	0.258	<0.4
GFF8	8dB	1528.6-1567.8	0.250	<0.4
GFF8B*	8dB	1528.6-1567.8	0.202	<0.4
GFF8L*	8dB	1575.2-1617.6	0.243	<0.4
GFF9	9dB	1524-1573	0.281	<0.4
GFF9B*	9dB	1524-1573	0.325	<0.4
GFF10	10dB	1523-1573	0.308	<0.4
GFF11	11dB	1524-1572.3	0.245	<0.4



- 膜层厚度小于境外友商
- 膜片基底厚度比境外友商薄，但面形远好于境外友商
- 温漂性能优于境外友商
- TDL 优于境外友商
- PDL 优于境外友商

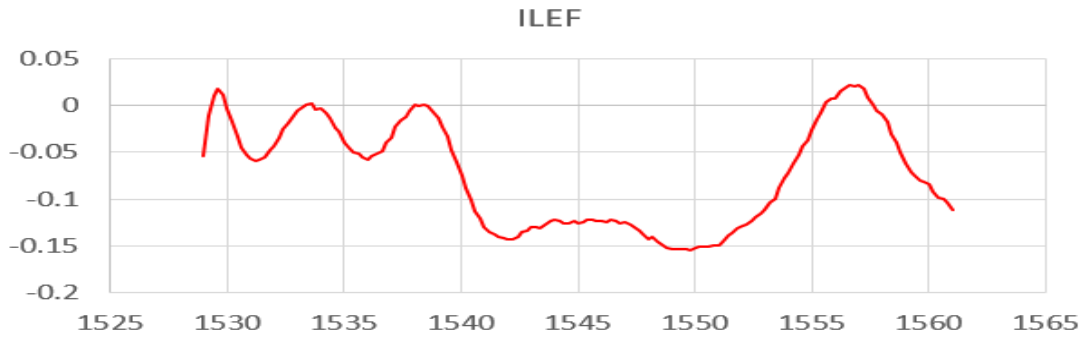
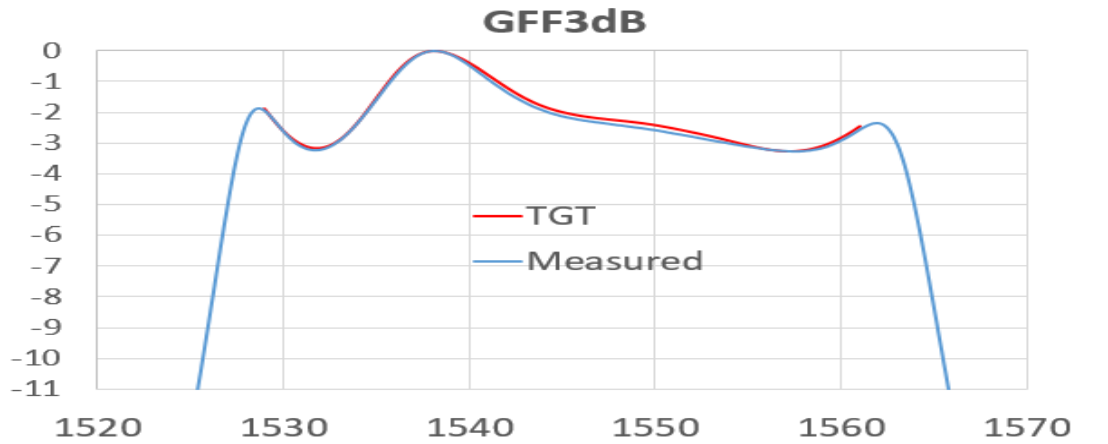


GFF2dB (21-40-0042-01)



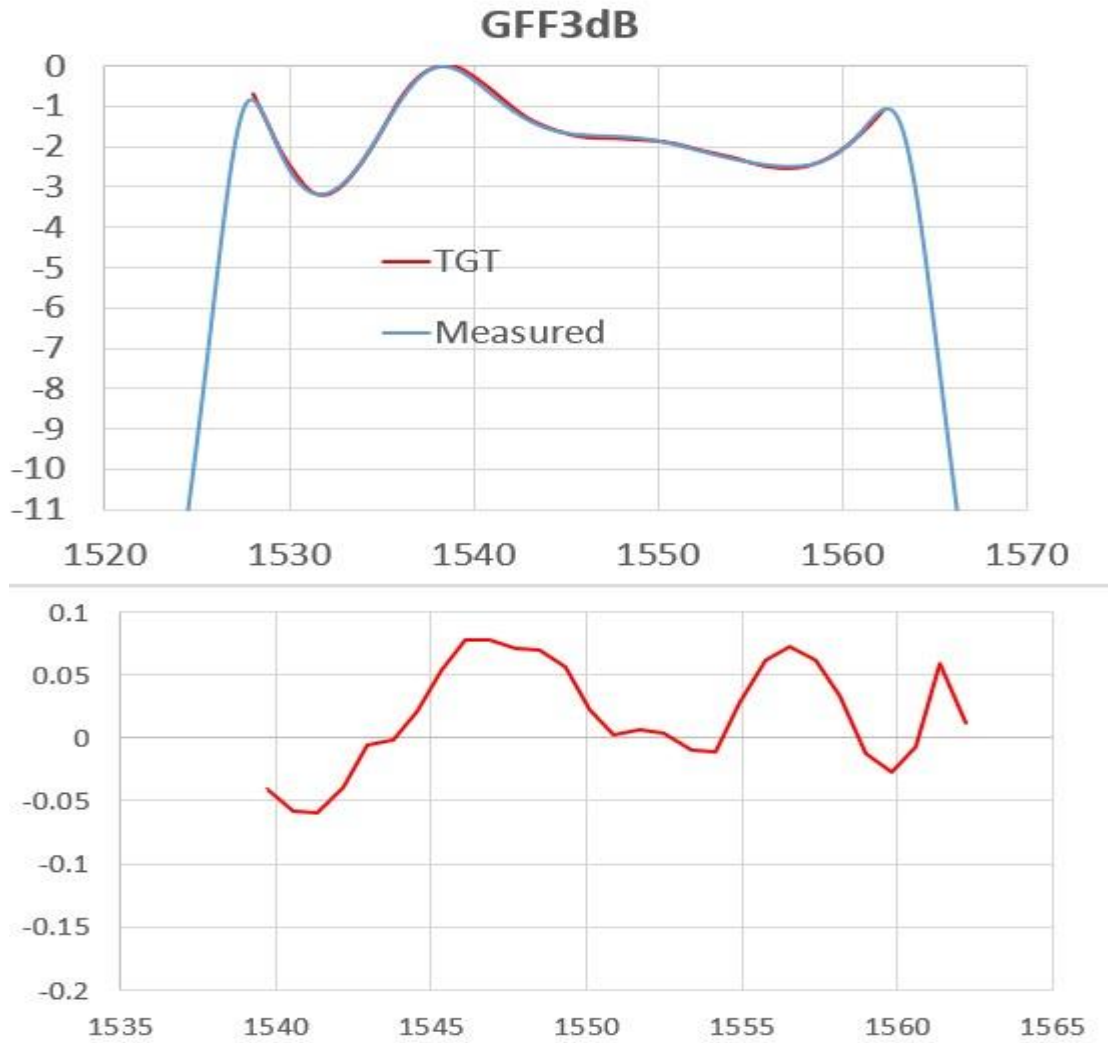
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1528.3-1567.3	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.15	0.047
Peak to Peak Error Function	dB	<= 0.25	0.14
Polarization Dependent Loss	dB	<= 0.1	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF3dB (21-40-0005-01)



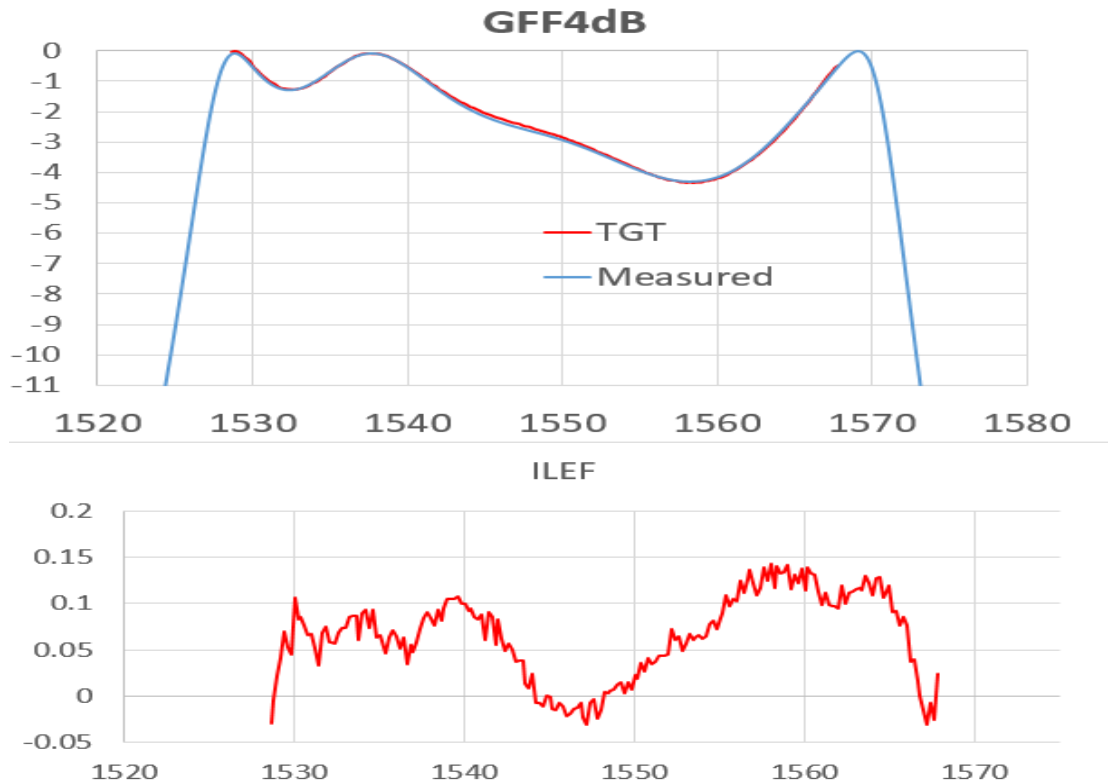
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1529-1561	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.3	0.094
Peak to Peak Error Function	dB	<= 0.5	0.17
$\Delta EF1=ABS(EF(1529nm)-EF(1560.8nm))$	dB	< =0.25	0.058
$\Delta EF2=ABS(EF(1530nm)-EF(1559.8nm))$	dB	< =0.25	0.082
$\Delta EF3=ABS(EF(1531nm)-EF(1558.8nm))$	dB	< =0.25	0.006
IL@1479~1527nm	dB	>=5	10.54
IL@1564.8~1602nm	dB	>=5	7.889
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.4+/-0.1)*(1.4+/-0.1)*(1.2+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF3dB (21-40-0027-01)



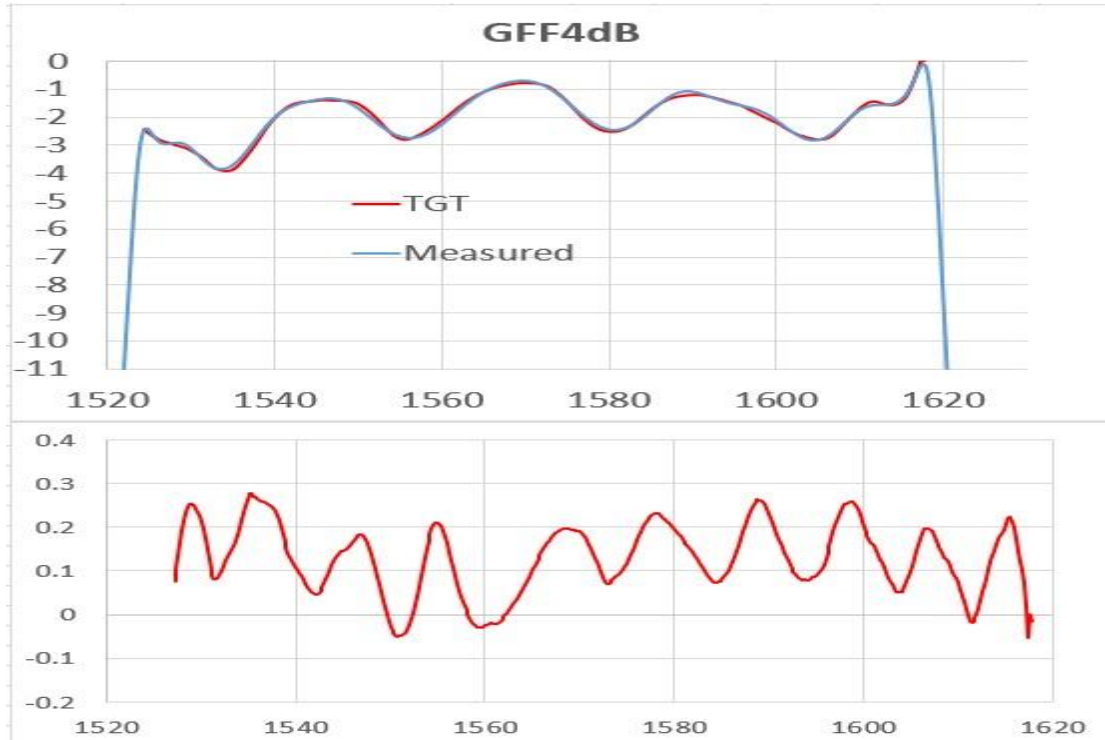
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1528-1562.2	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.2	0.05
Peak to Peak Error Function	dB	<= 0.4	0.19
Polarization Dependent Loss	dB	<= 0.1	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.2+/-0.1)*(1.2+/-0.1)*(1.0+/-0.2)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF4dB (21-40-0020-01)



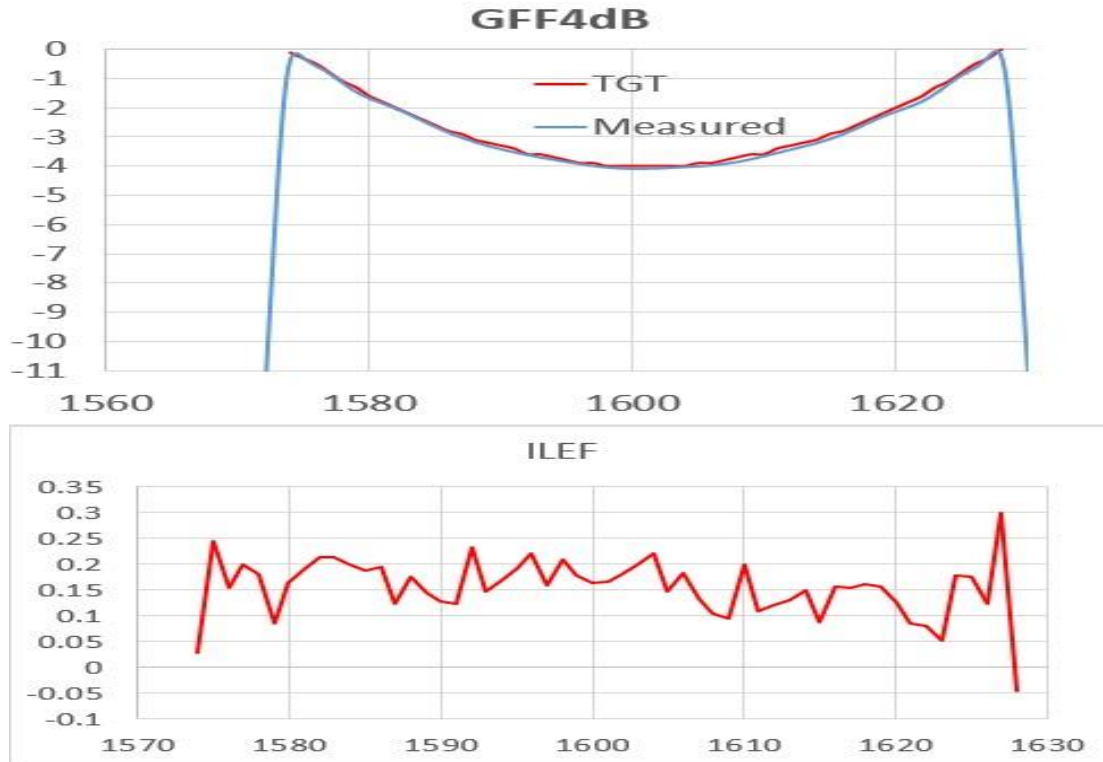
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1528.6-1567.8	
ILtgt	dB	See target GFF filter curve	
ILmin @1537.8nm	dB	<= 0.15	0.085
Peak to Peak Error Function	dB	<= 0.35	0.173
$\Delta EF1=ABS(EF(1529nm)-EF(1567nm))$	dB	< =0.2	0.037
$\Delta EF2=ABS(EF(1530nm)-EF(1566nm))$	dB	< =0.2	0.030
$\Delta EF3=ABS(EF(1531nm)-EF(1565nm))$	dB	< =0.2	0.053
IL@1480~1525nm	dB	>=4.5	9.5
IL@1572~1600nm	dB	>=4.5	6.5
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF4dB (21-40-0021-01)



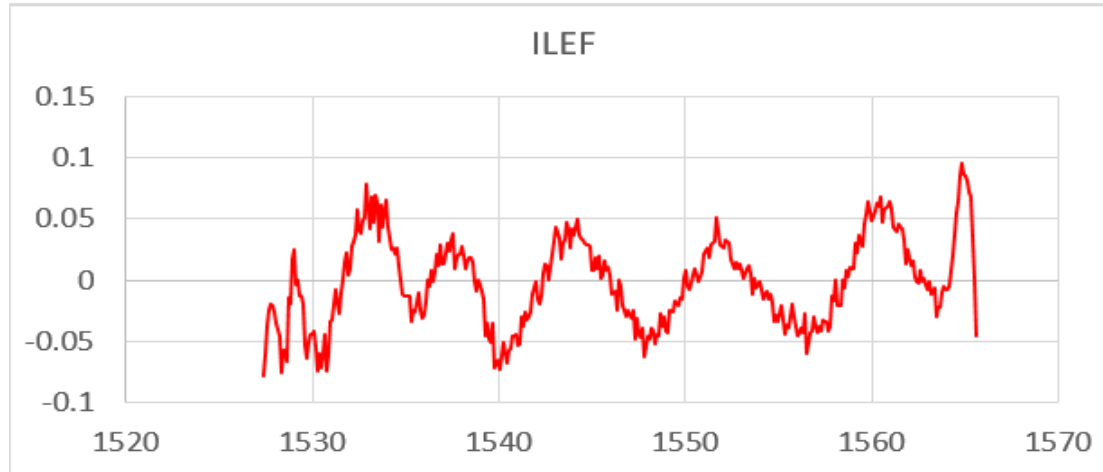
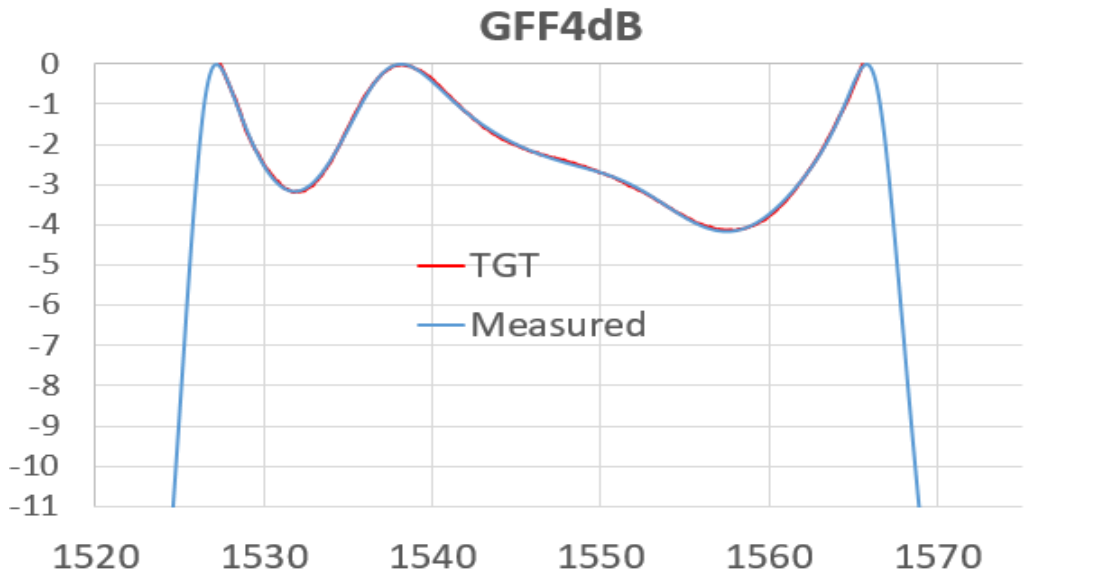
Parameters	Unit	Specifications	图例 /Example
Target Wavelength Range	nm	1524.2-1617.8	
ILtgt	dB	See target GFF filter curve	
ILmin @1617.8nm	dB	<= 0.15	0.116
Peak to Peak Error Function	dB	<= 0.4	0.32
$\Delta EF1=ABS(EF(1524.2nm)-EF(1617.4nm))$	dB	< =0.3	0.027
$\Delta EF2=ABS(EF(1525.2nm)-EF(1616.4nm))$	dB	< =0.3	0.071
$\Delta EF3=ABS(EF(1526.2nm)-EF(1615.4nm))$	dB	< =0.3	0.17
IL@1300~1520nm	dB	>=6	18.8
IL@1621~1700nm	dB	>=6	13.9
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF4dB (21-40-0028-01)



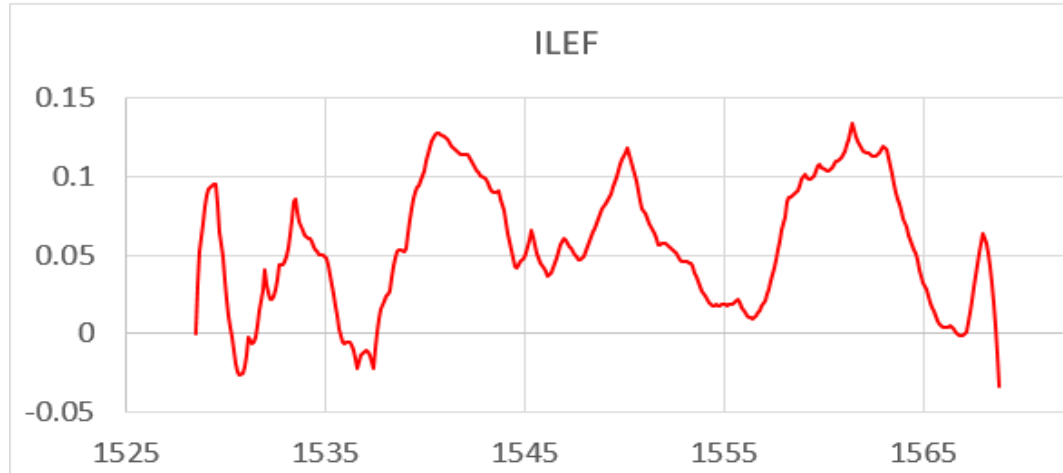
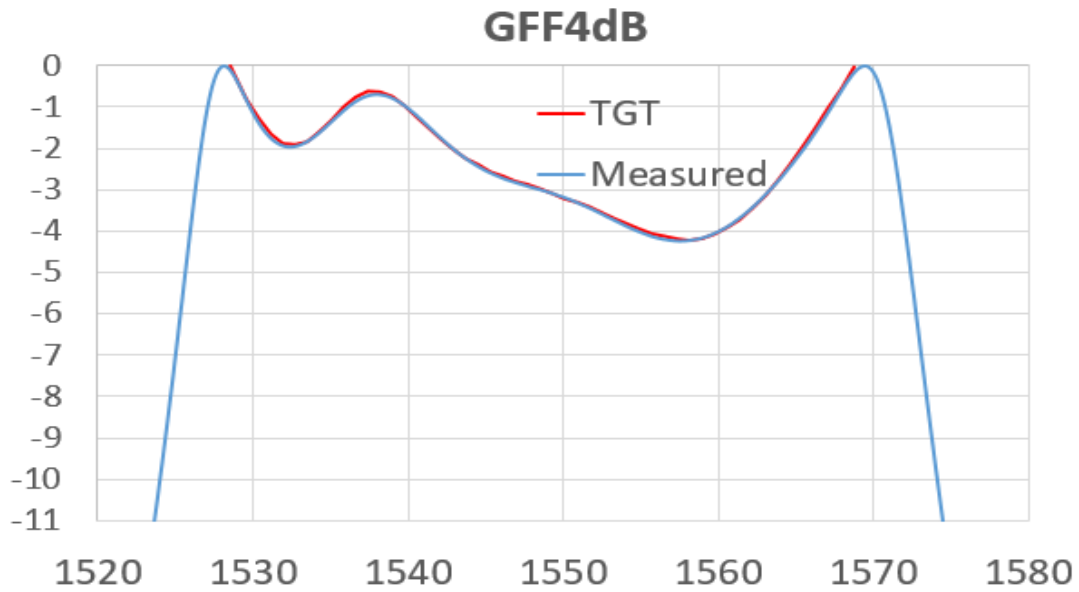
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1574-1628	
ILtgt	dB	See target GFF filter curve	
ILmin @1574&1628nm	dB	<= 1	0.1
Peak to Peak Error Function	dB	<= 0.6	0.34
$\Delta EF1=ABS(EF(1574nm)-EF(1628nm))$	dB	< =0.4	0.02
$\Delta EF2=ABS(EF(1575nm)-EF(1627nm))$	dB	< =0.4	0.03
$\Delta EF3=ABS(EF(1576nm)-EF(1626nm))$	dB	< =0.4	0.05
IL@1520~1570nm	dB	>=20	25.3
IL@1632~1650nm	dB	>=20	22.7
Polarization Dependent Loss	dB	<= 0.15	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(3.2\pm 0.2)*(3.2\pm 0.2)*(1.2\pm 0.2)$	
Edge/Corner Chip	mm	<= 0.3	
Scratch/Dig		40/20	

GFF4dB (21-40-0035-01)



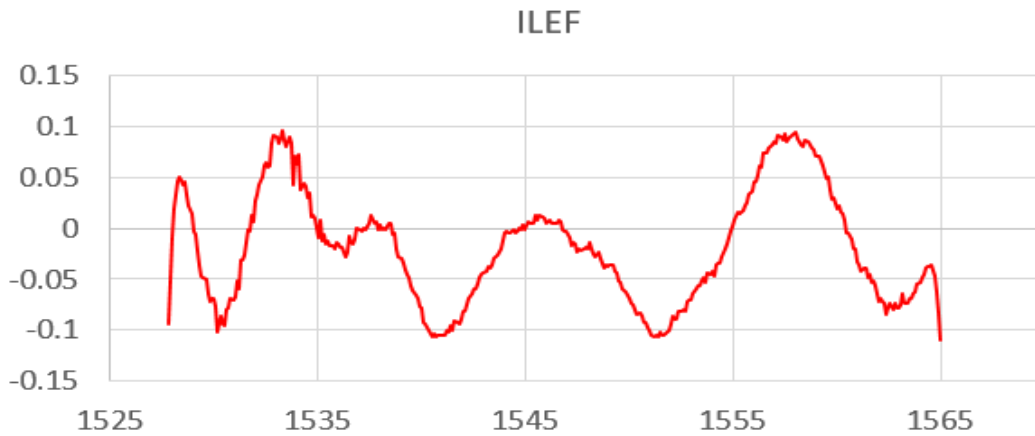
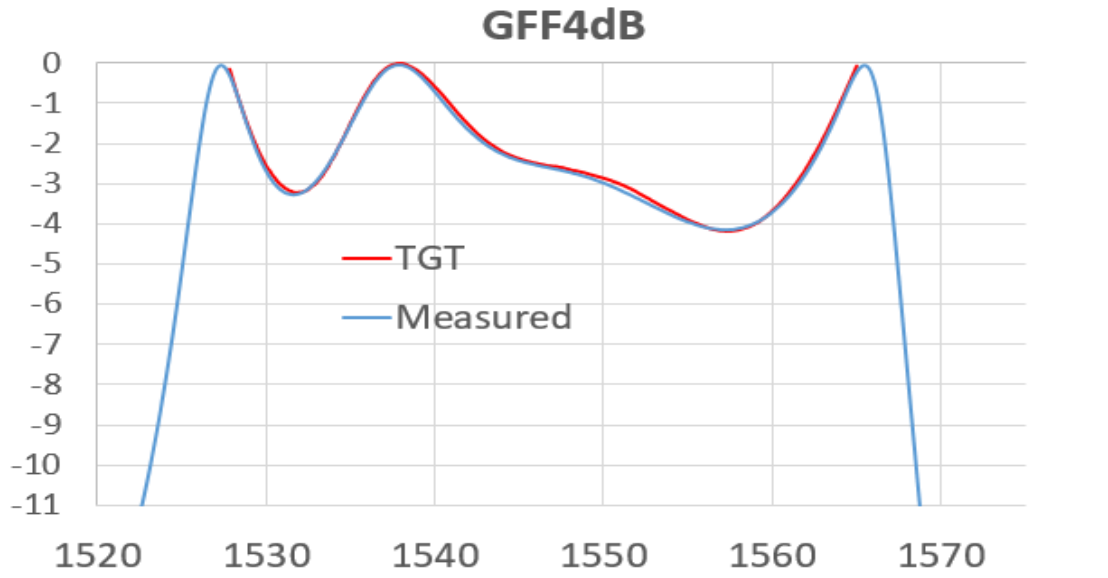
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1527.4-1565.6	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.15	0.05
Peak to Peak Error Function	dB	<= 0.25	0.17
Polarization Dependent Loss	dB	<= 0.1	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF4dB (21-40-0037-01)



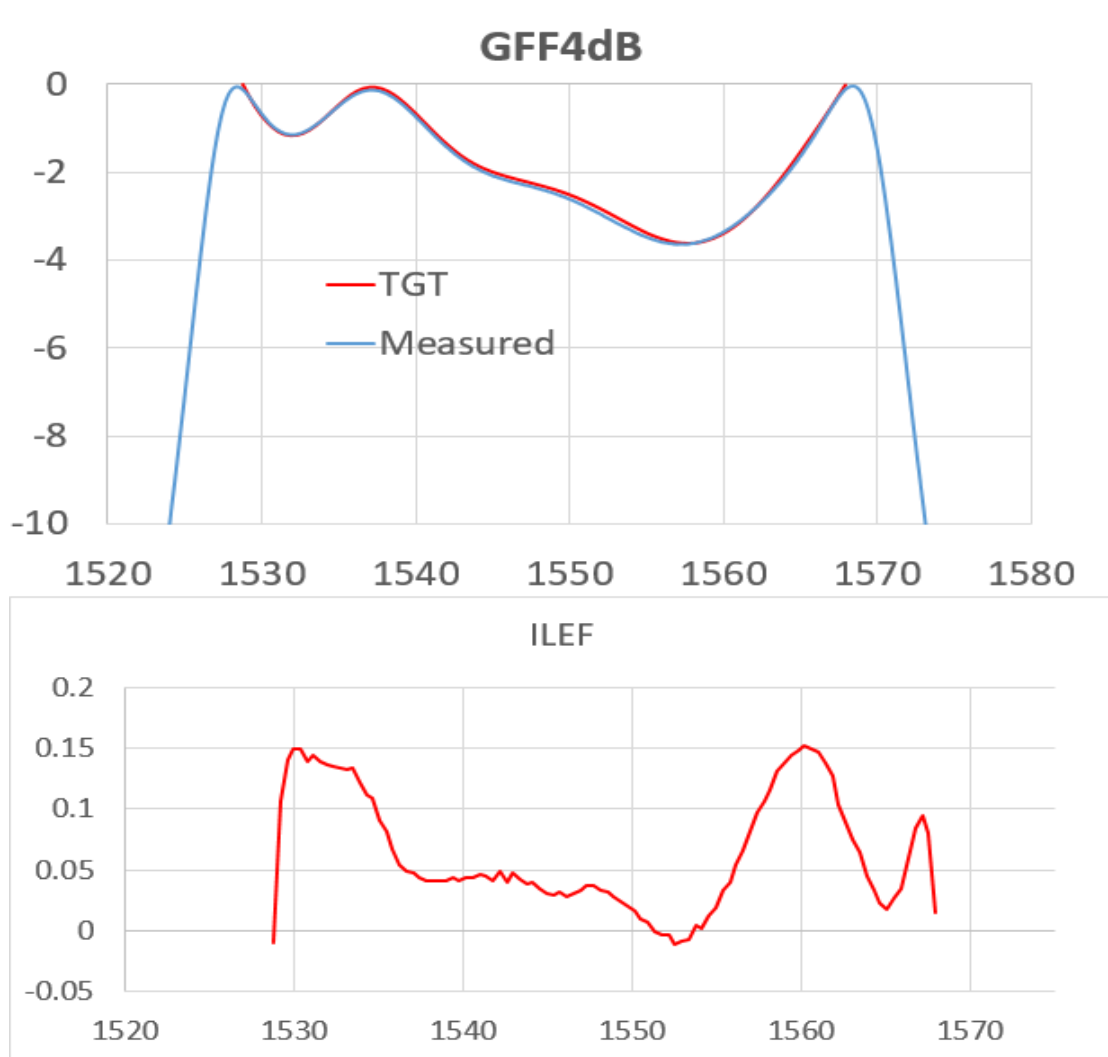
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1528.5-1568.8	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.15	0.05
Peak to Peak Error Function	dB	<= 0.4	0.16
Polarization Dependent Loss	dB	<= 0.1	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF4dB (21-40-0043-01)



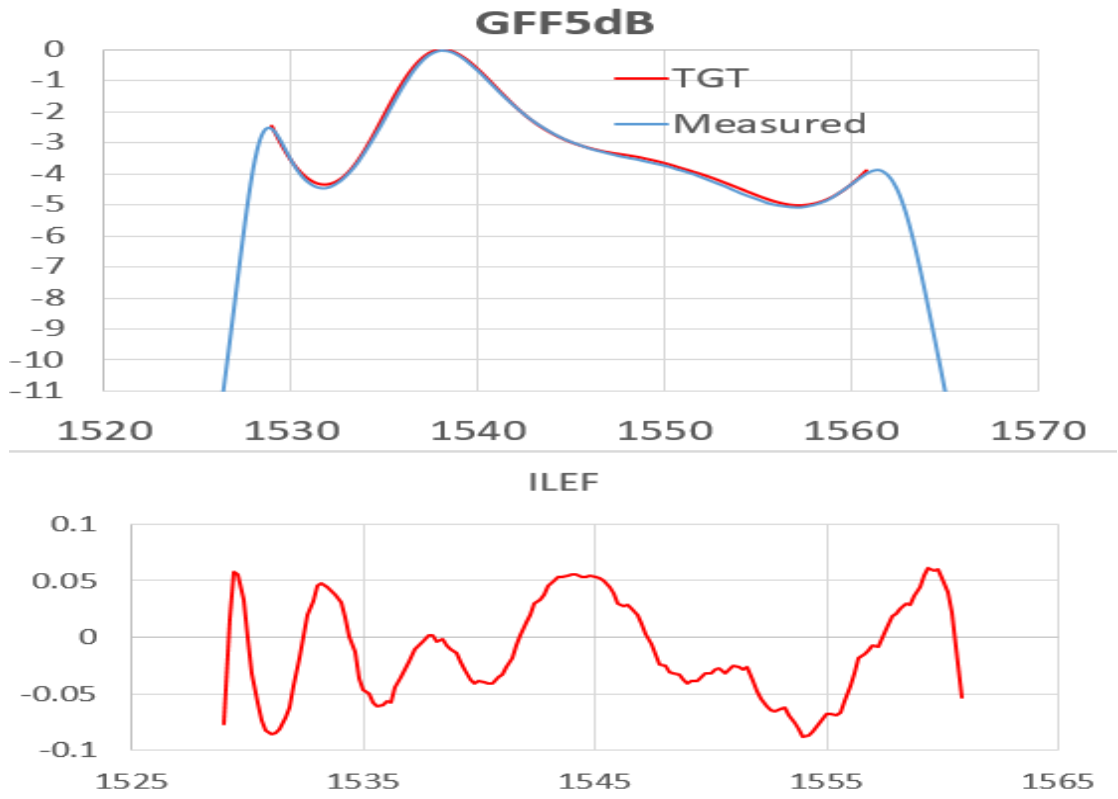
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1527.8-1565	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.15	0.035
Peak to Peak Error Function @1529-1568.2nm	dB	<= 0.3	0.20
Polarization Dependent Loss	dB	<= 0.1	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.4+/-0.1)*(1.4+/-0.1)*(0.9+/-0.1)	
Edge/Corner Chip	mm	<= 0.1	

GFF4dB (21-40-0055-01)



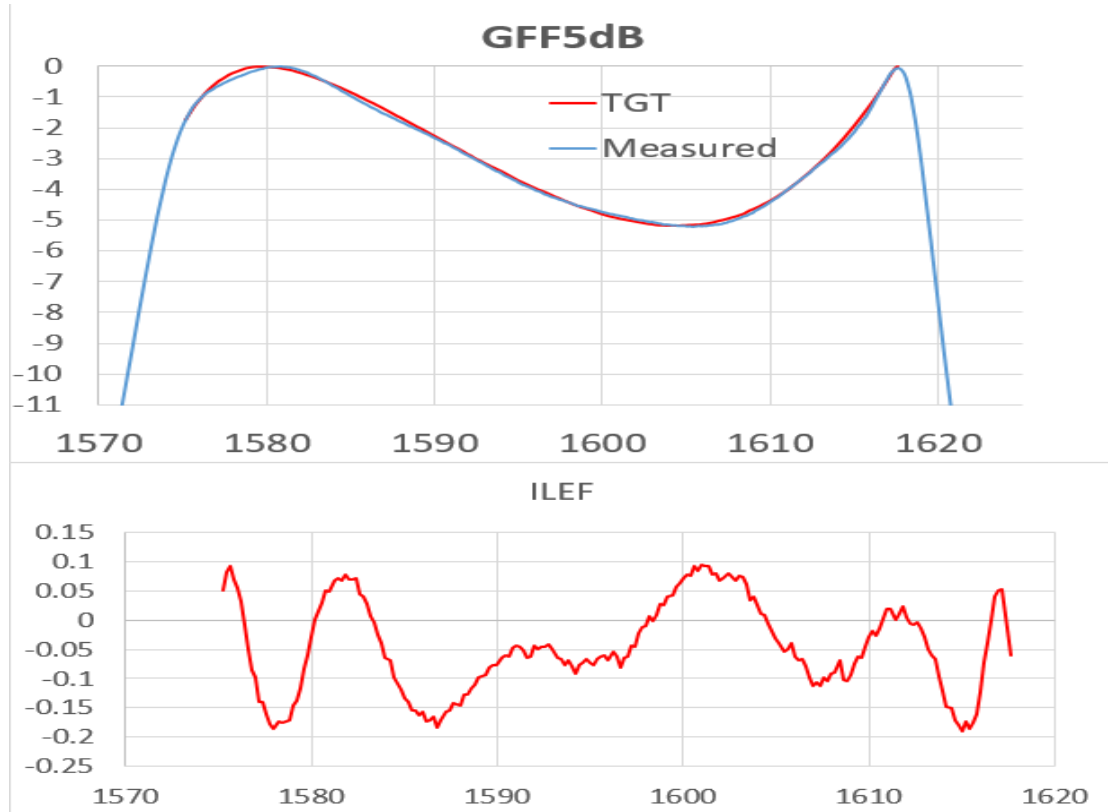
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1528.733-1567.952	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.1	0.04
Peak to Peak Error Function	dB	<= 0.2	0.16
Polarization Dependent Loss	dB	<= 0.1	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.1)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF5dB (21-40-0004-01)



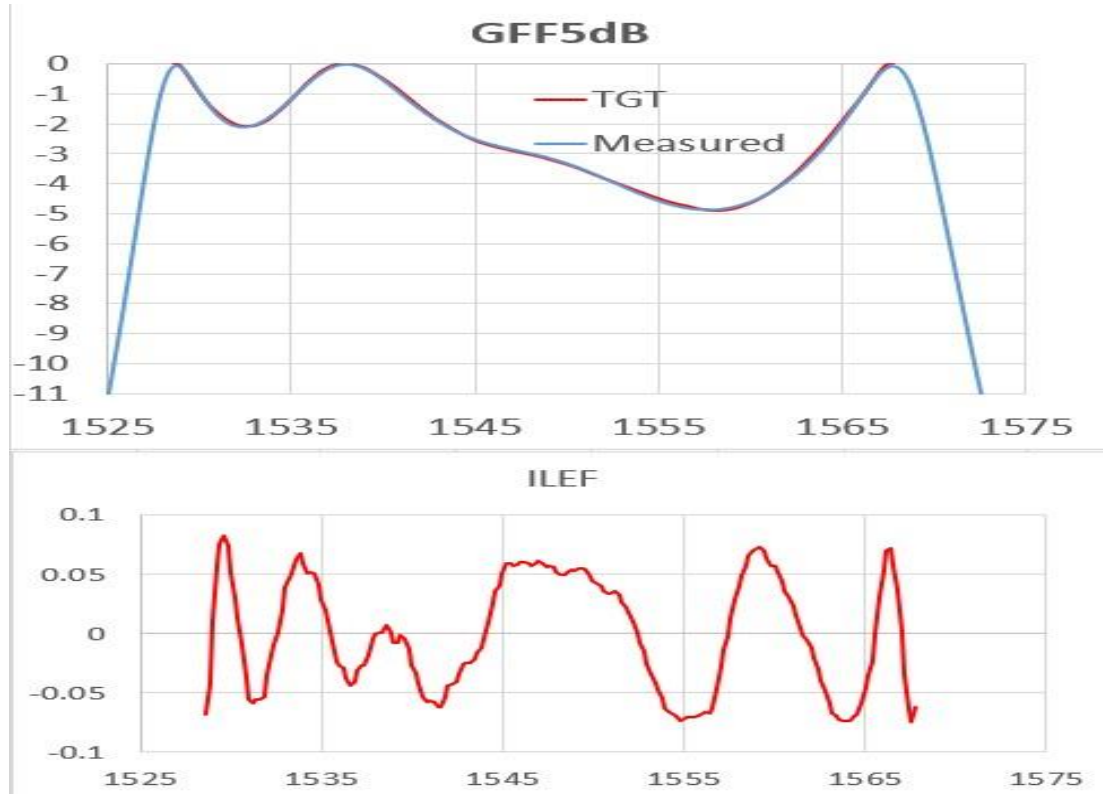
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1529-1561	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.3	0.056
Peak to Peak Error Function	dB	<= 0.5	0.149
$\Delta EF1=ABS(EF(1529nm)-EF(1560.8nm))$	dB	< =0.25	0.13
$\Delta EF2=ABS(EF(1530nm)-EF(1559.8nm))$	dB	< =0.25	0.06
$\Delta EF3=ABS(EF(1531nm)-EF(1558.8nm))$	dB	< =0.25	0.122
IL@1479~1527nm	dB	>=5	14.2
IL@1564.8~1602nm	dB	>=5	10.3
Polarization Dependent Loss	dB	<= 0.08	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.4\pm 0.1)*(1.4\pm 0.1)*(1.2\pm 0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF5dB (21-40-0016-01)



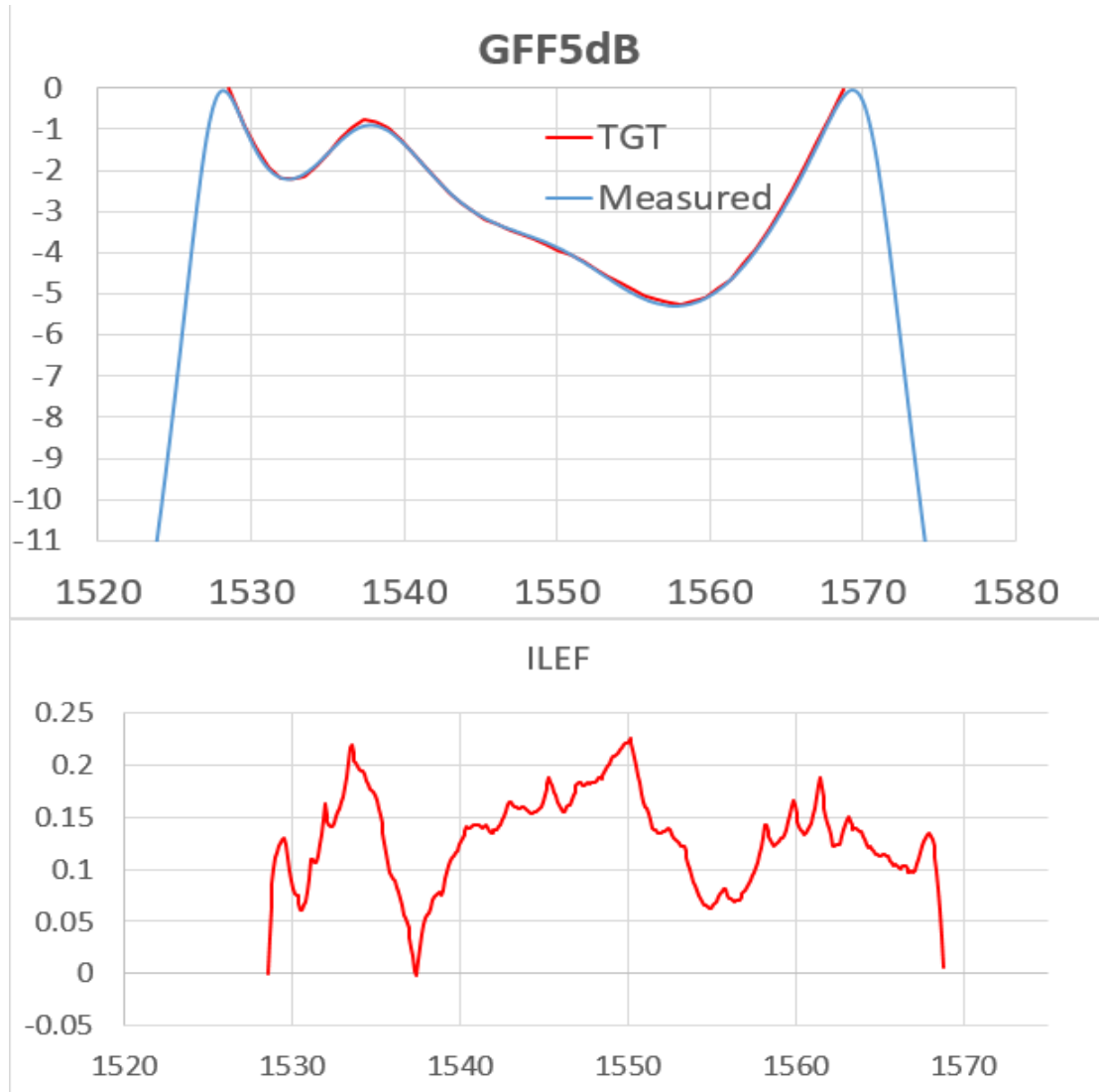
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1575.2-1617.6	
ILtgt	dB	See target GFF filter curve	
ILmin @1617.6nm	dB	<= 0.15	0.07
Peak to Peak Error Function	dB	<= 0.4	0.285
$\Delta EF1=ABS(EF(1576nm)-EF(1617nm))$	dB	< =0.3	0.004
$\Delta EF2=ABS(EF(1577nm)-EF(1616nm))$	dB	< =0.3	0.025
$\Delta EF3=ABS(EF(1578nm)-EF(1615nm))$	dB	< =0.3	0.004
IL@1550~1570nm	dB	>=5.5	15.1
IL@1620~1640nm	dB	>=5.5	8.1
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF5dB (21-40-0024-01)



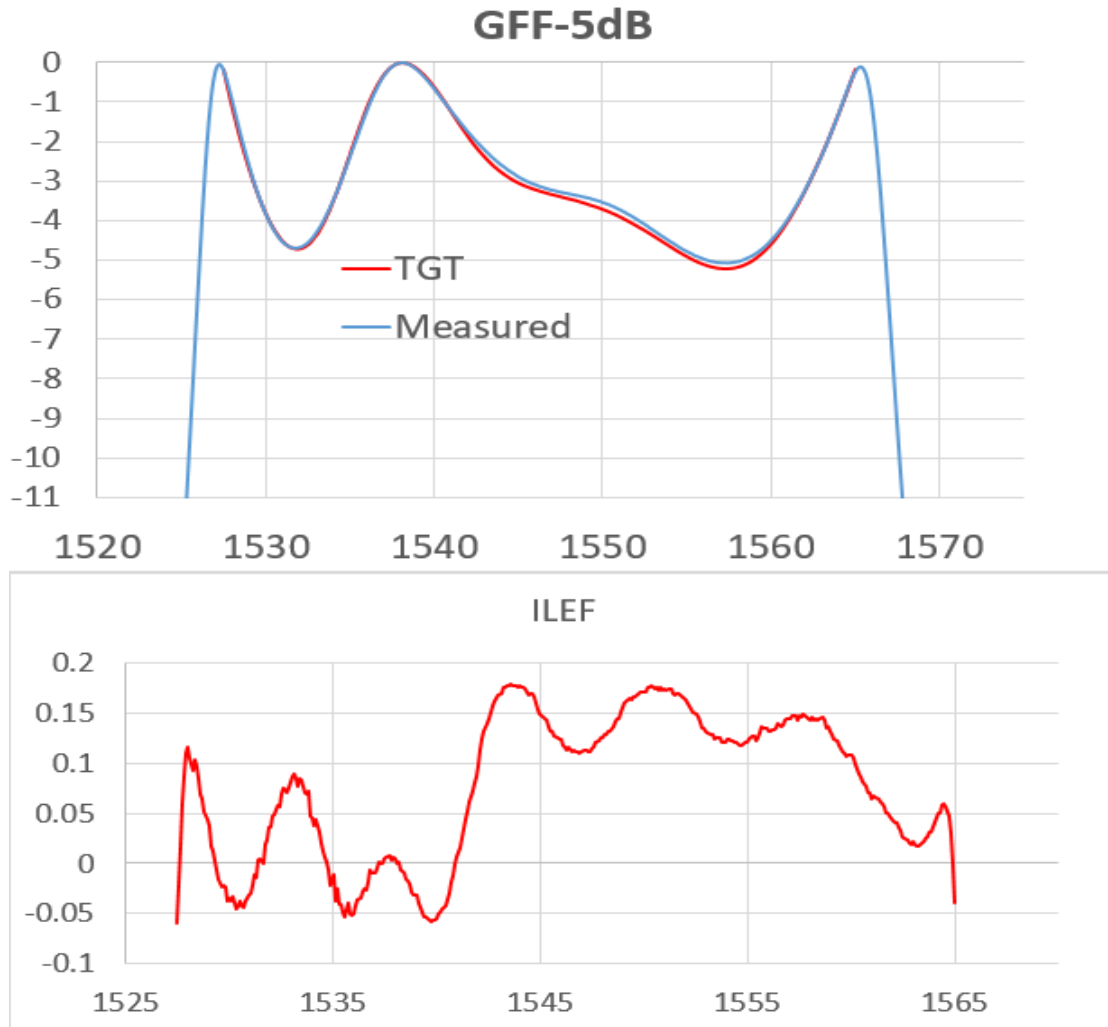
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1528.6-1567.8	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<=0.3	0.068
Peak to Peak Error Function	dB	<= 0.35	0.18
$\Delta EF1=ABS(EF(1529nm)-EF(1567nm))$	dB	< =0.2	0.042
$\Delta EF2=ABS(EF(1530nm)-EF(1566nm))$	dB	< =0.2	0.086
$\Delta EF3=ABS(EF(1531nm)-EF(1565nm))$	dB	< =0.2	0.059
IL@1480~1525nm	dB	>=5	10.6
IL@1571~1600nm	dB	>=5	9.0
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF5dB (21-40-0039-01)



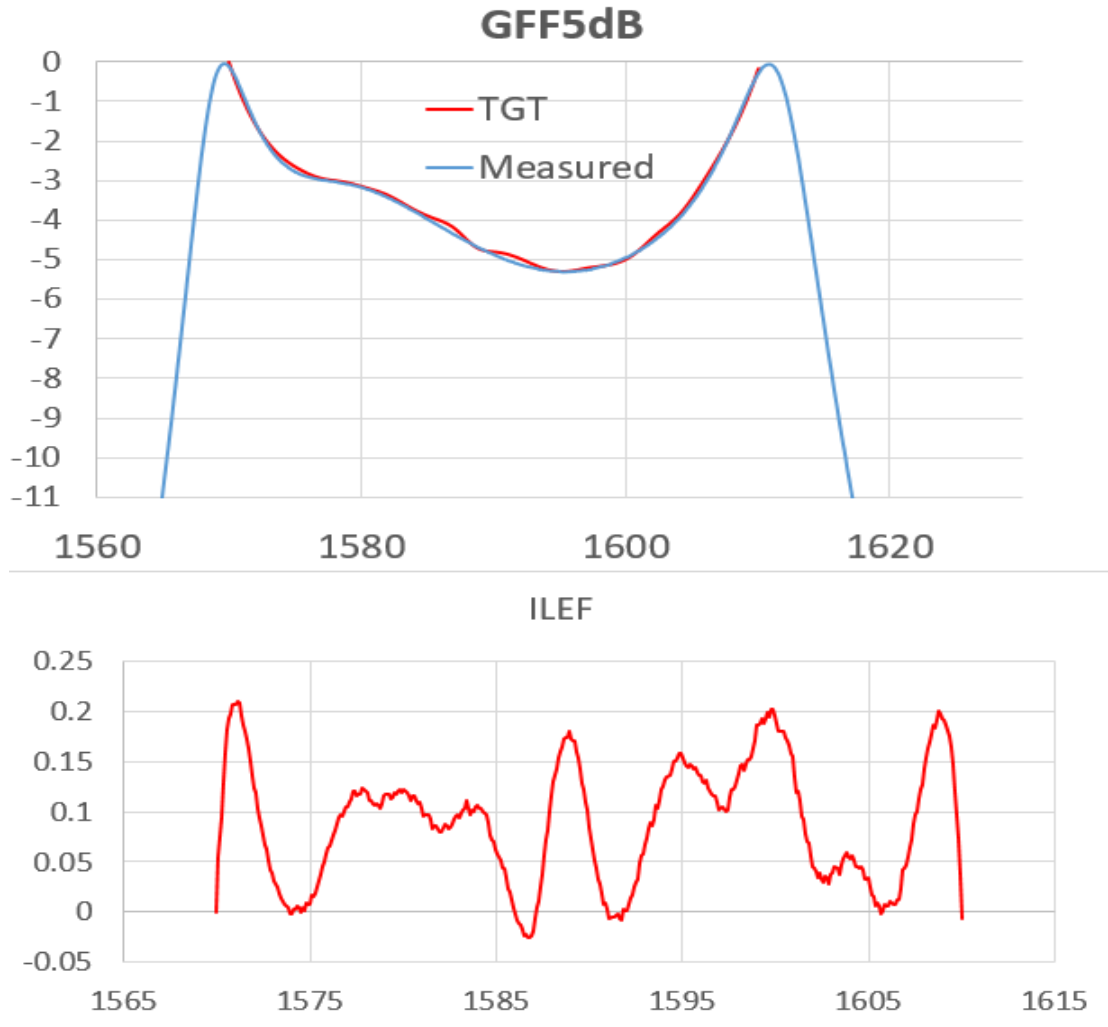
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1528.5-1568.8	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.15	0.04
Peak to Peak Error Function	dB	<= 0.4	0.2
Polarization Dependent Loss	dB	<= 0.1	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF5dB (21-40-0044-01)



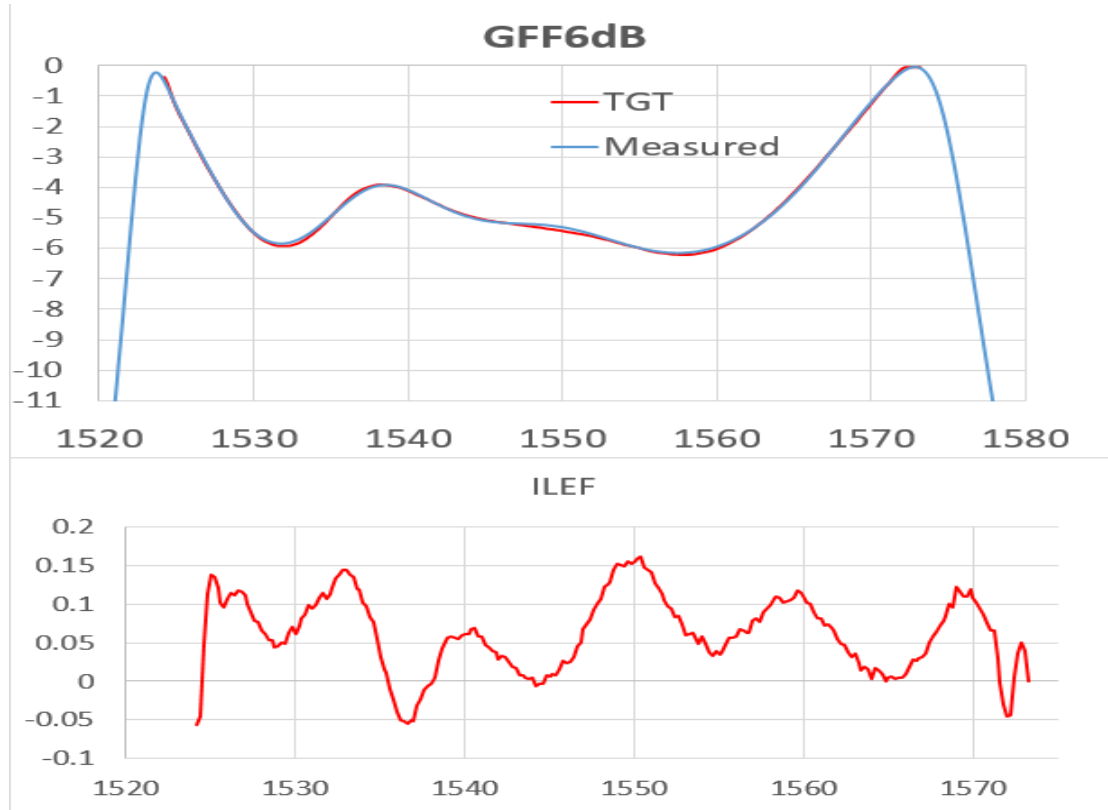
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1527.8-1565	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.15	0.05
Peak to Peak Error Function @1529-1568.2nm	dB	<= 0.3	0.23
Polarization Dependent Loss	dB	<= 0.1	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.4+/-0.1)*(1.4+/-0.1)*(0.9+/-0.1)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF5dB (21-40-0056-01)



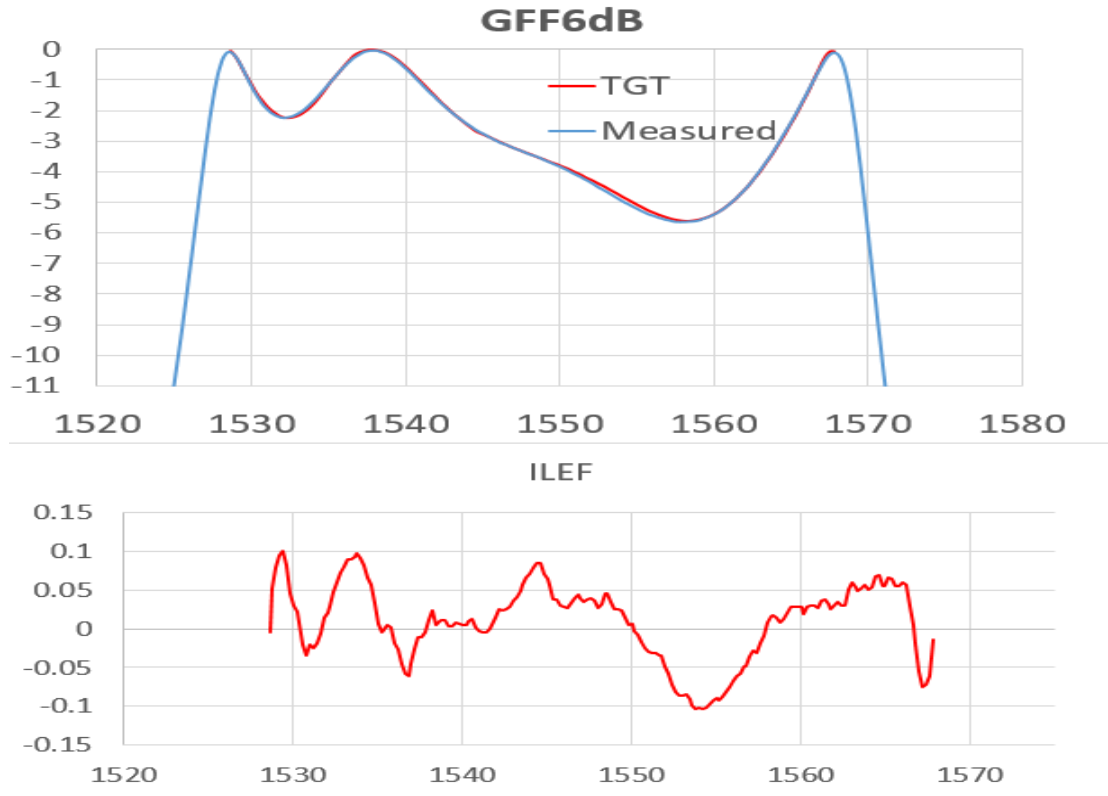
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1570-1610	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.15	0.06
Peak to Peak Error Function	dB	<= 0.3	0.23
Polarization Dependent Loss	dB	<= 0.1	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF6dB (21-40-0003-01)



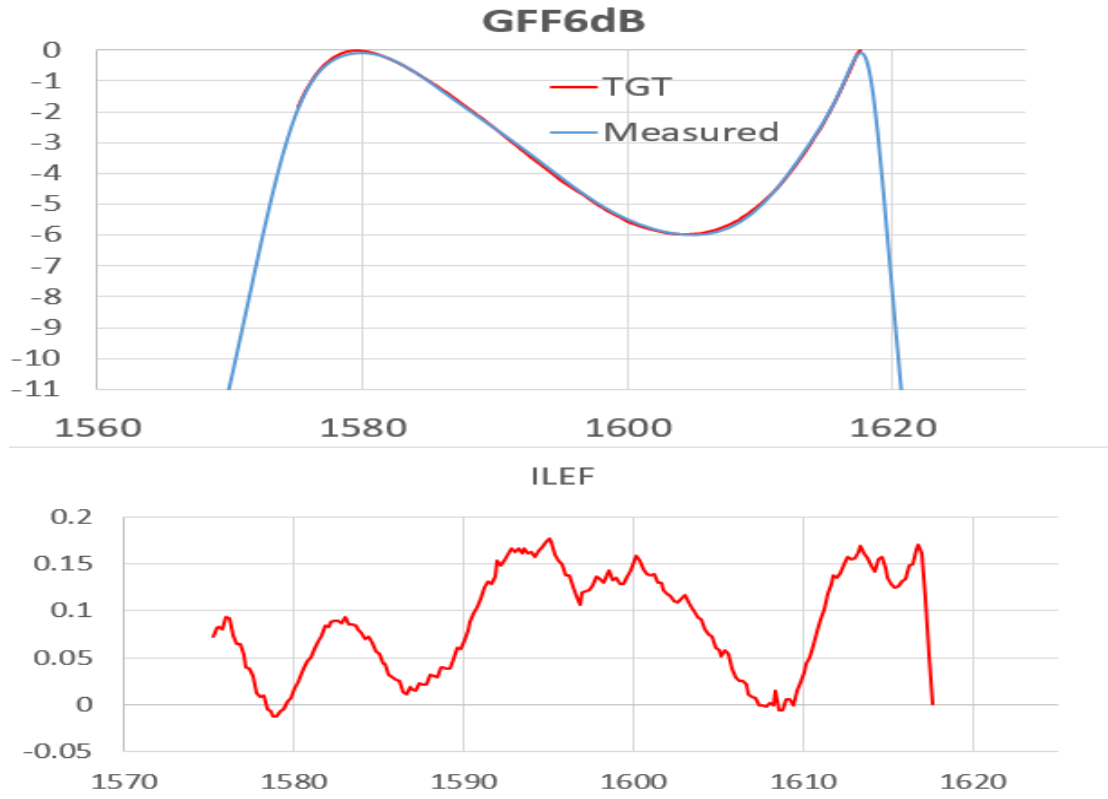
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1524.2-1573.2	
ILtgt	dB	See target GFF filter curve	
ILmin @1573.2nm	dB	<= 0.15	0.032
Peak to Peak Error Function	dB	<= 0.4	0.216
$\Delta EF1=ABS(EF(1525nm)-EF(1572nm))$	dB	< =0.3	0.17
$\Delta EF2=ABS(EF(1526nm)-EF(1571nm))$	dB	< =0.3	0.04
$\Delta EF3=ABS(EF(1527nm)-EF(1570nm))$	dB	< =0.3	0.004
IL@1480~1520nm	dB	>=4.5	16.4
IL@1577~1600nm	dB	>=4.5	8.5
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF6dB (21-40-0011-01)



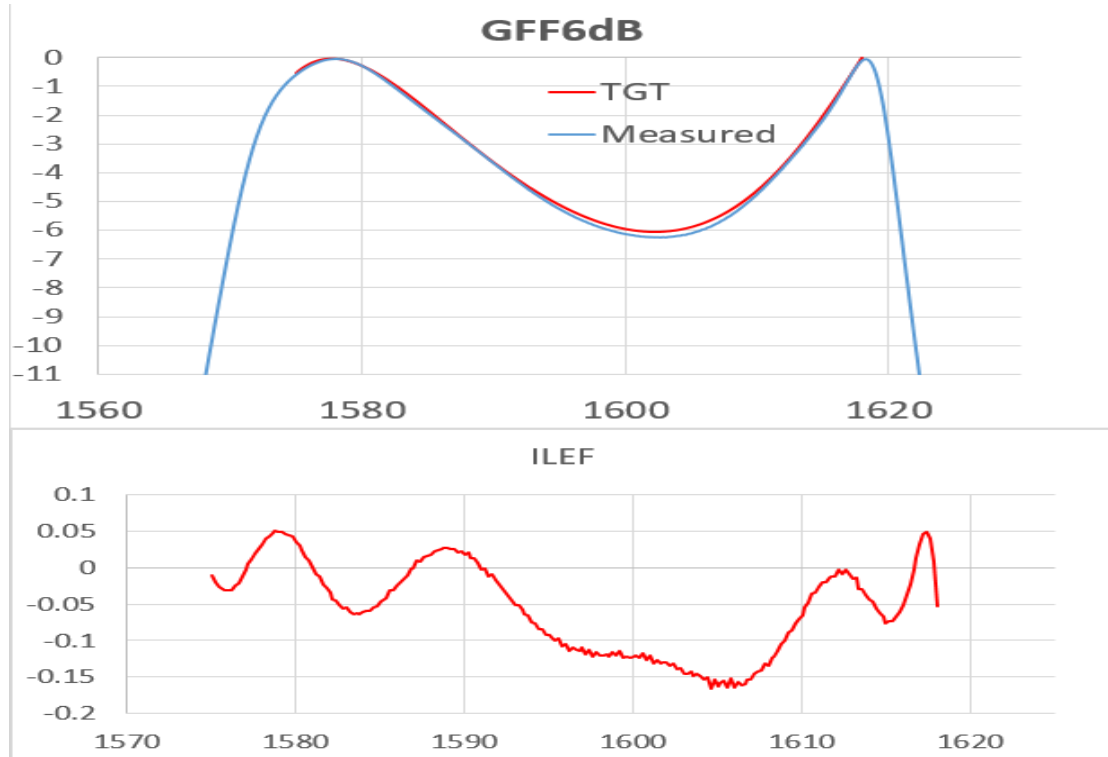
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1528.6-1567.8	
ILtgt	dB	See target GFF filter curve	
ILmin @1567.8nm	dB	<= 0.15	0.1
Peak to Peak Error Function	dB	<= 0.4	0.204
$\Delta EF1=ABS(EF(1529nm)-EF(1567nm))$	dB	< =0.3	0.132
$\Delta EF2=ABS(EF(1530nm)-EF(1566nm))$	dB	< =0.3	0.029
$\Delta EF3=ABS(EF(1531nm)-EF(1565nm))$	dB	< =0.3	0.076
IL@1480~1525nm	dB	>=4.5	11.2
IL@1572~1600nm	dB	>=4.5	14.8
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF6dB (21-40-0017-01)



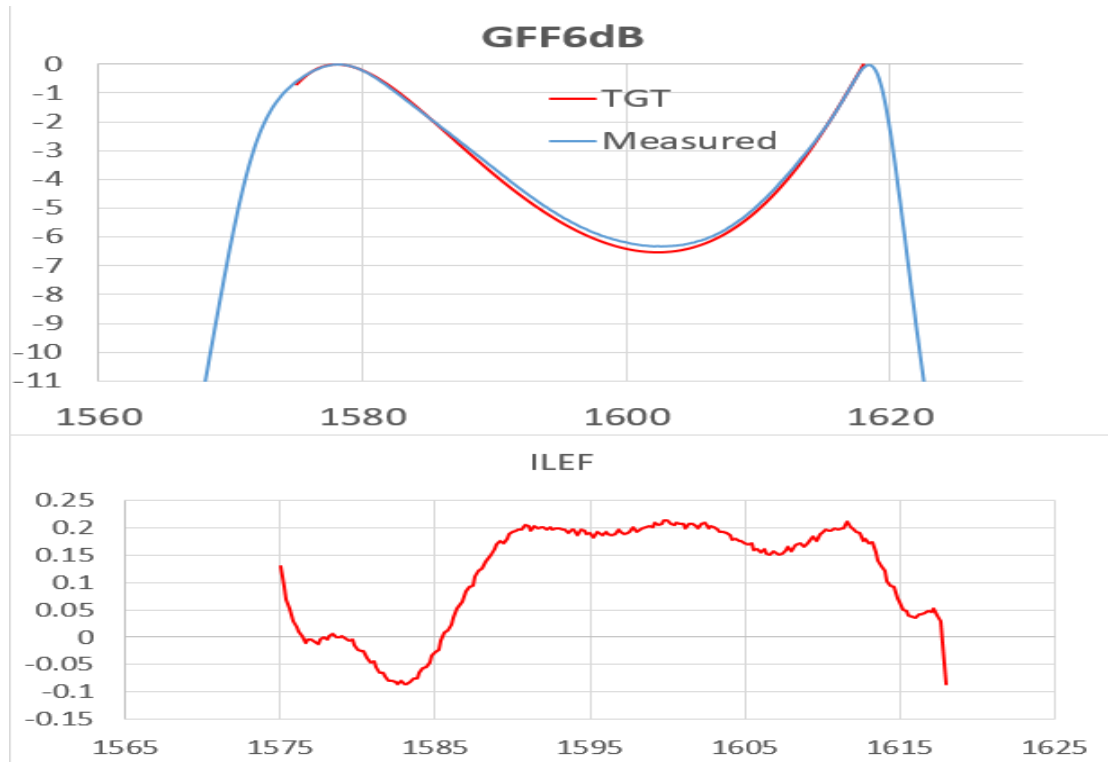
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1575.2-1617.6	
ILtgt	dB	See target GFF filter curve	
ILmin @1617.6nm	dB	<= 0.15	0.083
Peak to Peak Error Function	dB	<= 0.4	0.189
$\Delta EF1=ABS(EF(1576nm)-EF(1617nm))$	dB	< =0.3	0.069
$\Delta EF2=ABS(EF(1577nm)-EF(1616nm))$	dB	< =0.3	0.080
$\Delta EF3=ABS(EF(1578nm)-EF(1615nm))$	dB	< =0.3	0.127
IL@1550~1570nm	dB	>=5.5	10.9
IL@1620~1640nm	dB	>=5.5	8.1
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF6dB (21-40-0046-01)



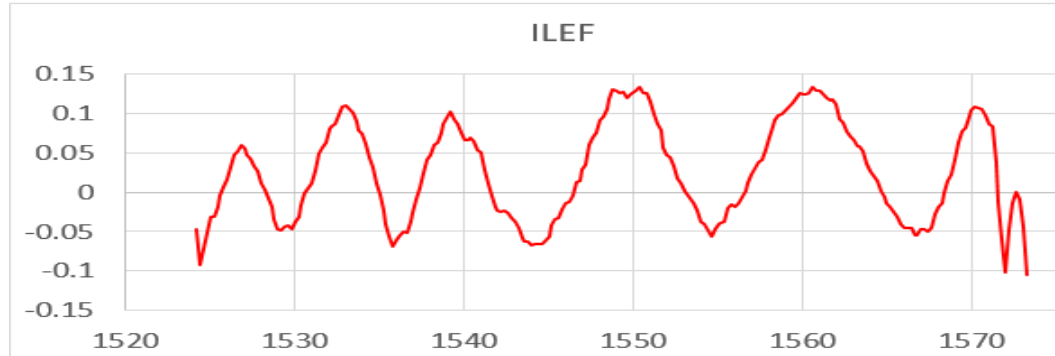
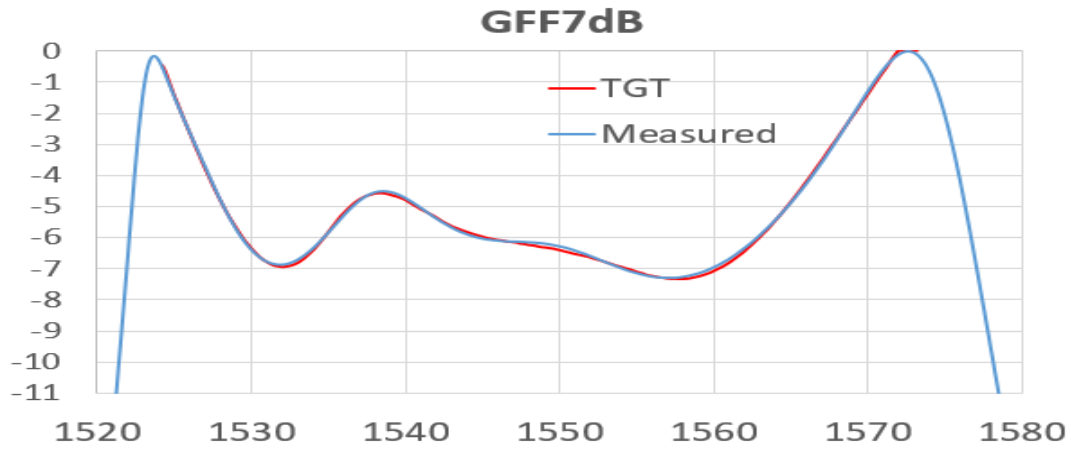
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1575-1618	
ILtgt	dB	See target GFF filter curve	
ILmin @1618nm	dB	<= 0.15	0.05
Peak to Peak Error Function	dB	<= 0.45	0.21
$\Delta EF1=ABS(EF(1575nm)-EF(1618nm))$	dB	< =0.25	0.043
$\Delta EF2=ABS(EF(1576nm)-EF(1617nm))$	dB	< =0.25	0.061
$\Delta EF3=ABS(EF(1577nm)-EF(1616nm))$	dB	< =0.25	0.049
IL@1550~1570nm	dB	>=5.5	6.4
IL@1622~1640nm	dB	>=5.5	10.1
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF6dB (21-40-0047-01)



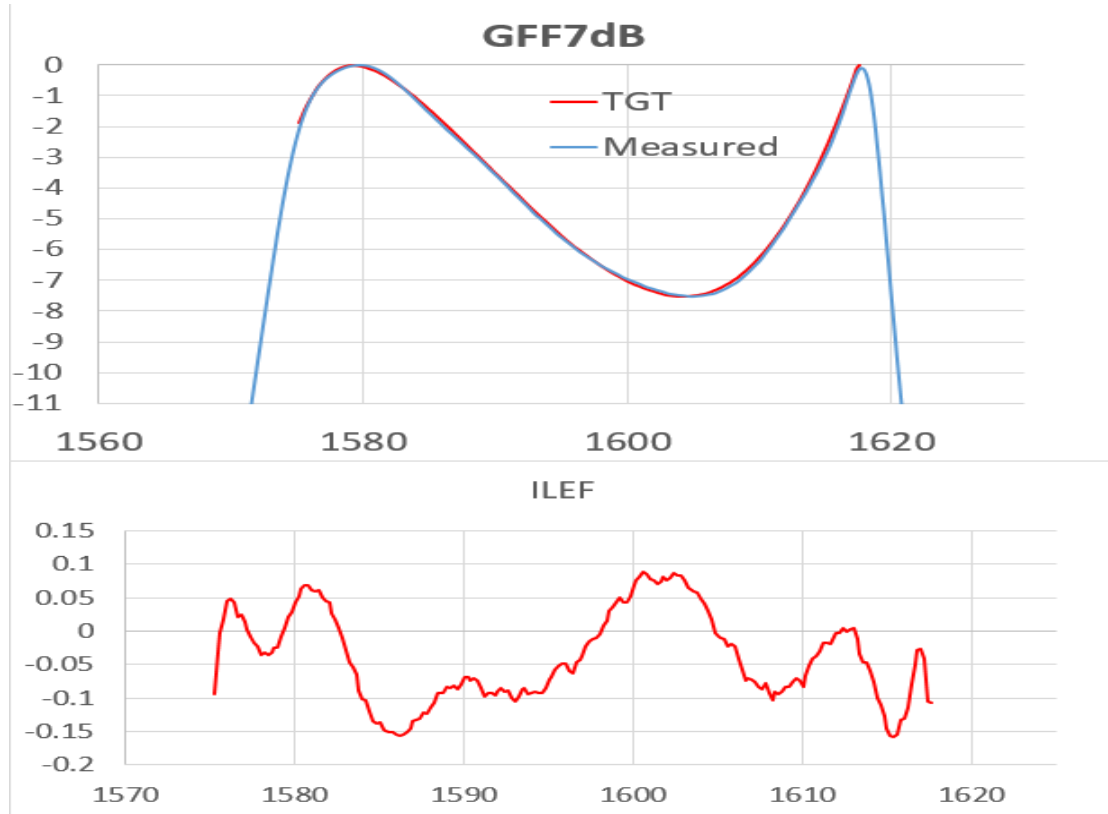
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1575-1618	
ILtgt	dB	See target GFF filter curve	
ILmin @1618nm	dB	<= 0.15	0.06
Peak to Peak Error Function	dB	<= 0.45	0.3
$\Delta EF1=ABS(EF(1575nm)-EF(1618nm))$	dB	< =0.25	0.21
$\Delta EF2=ABS(EF(1576nm)-EF(1617nm))$	dB	< =0.25	0.027
$\Delta EF3=ABS(EF(1577nm)-EF(1616nm))$	dB	< =0.25	0.041
IL@1550~1570nm	dB	>=5.5	6.2
IL@1622~1640nm	dB	>=5.5	9.3
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF7dB (21-40-0015-01)



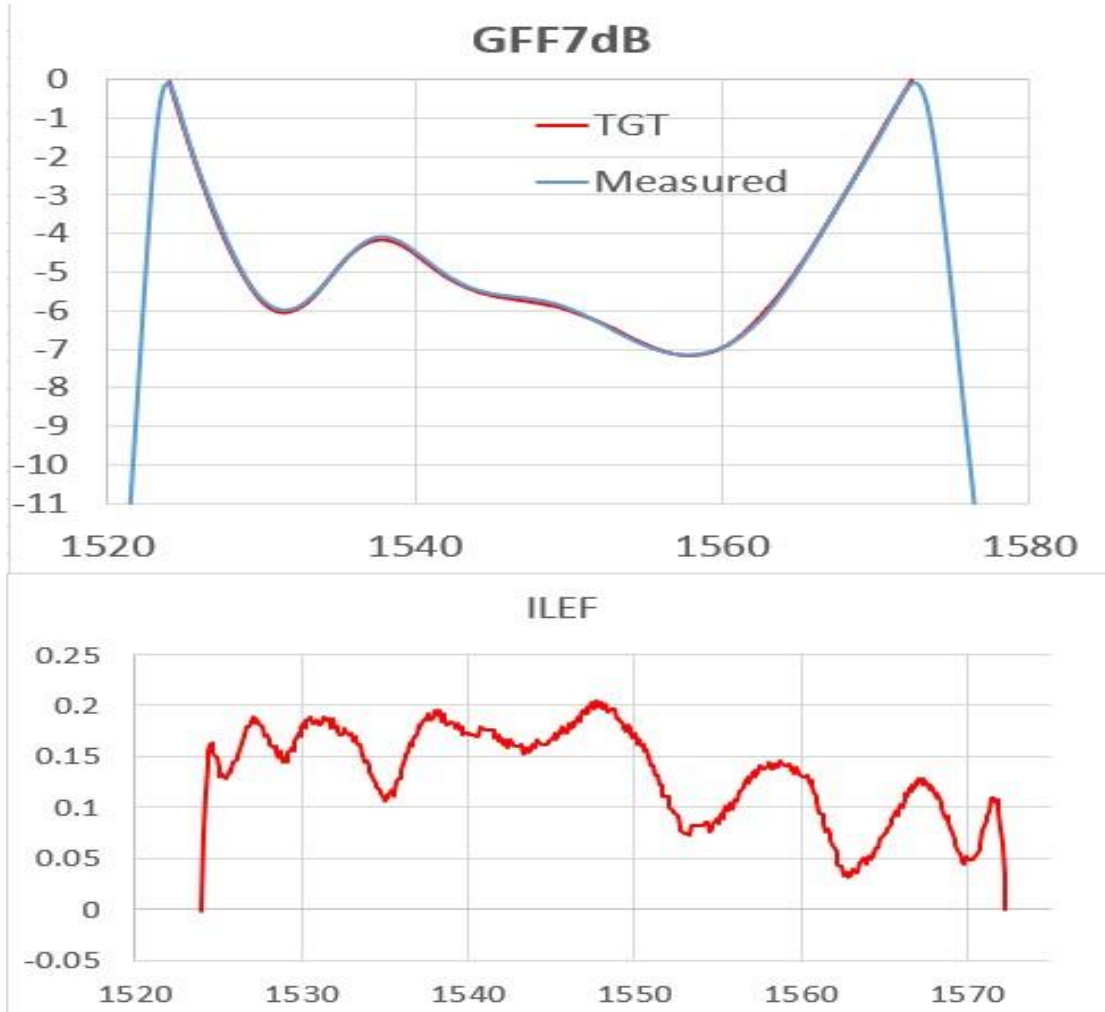
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1524.2-1573.2	
ILtgt	dB	See target GFF filter curve	
ILmin @1573.2nm	dB	<= 0.15	0.056
Peak to Peak Error Function	dB	<= 0.4	0.238
$\Delta EF1=ABS(EF(1525nm)-EF(1572nm))$	dB	< =0.3	0.070
$\Delta EF2=ABS(EF(1526nm)-EF(1571nm))$	dB	< =0.3	0.072
$\Delta EF3=ABS(EF(1527nm)-EF(1570nm))$	dB	< =0.3	0.049
IL@1480~1520nm	dB	>=4.5	17.3
IL@1577~1600nm	dB	>=4.5	6.9
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF7dB (21-40-0018-01)



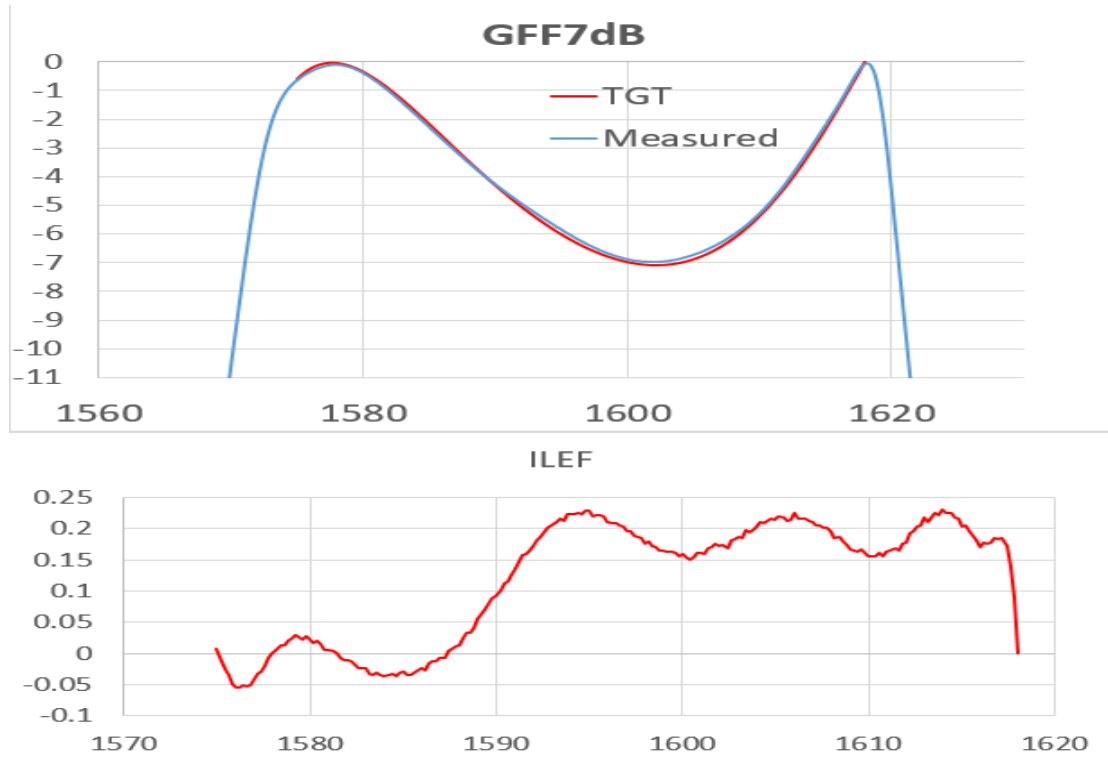
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1575.2-1617.6	
ILtgt	dB	See target GFF filter curve	
ILmin @1617.6nm	dB	<= 0.15	0.05
Peak to Peak Error Function	dB	<= 0.4	0.247
$\Delta EF1=ABS(EF(1576nm)-EF(1617nm))$	dB	< =0.3	0.071
$\Delta EF2=ABS(EF(1577nm)-EF(1616nm))$	dB	< =0.3	0.145
$\Delta EF3=ABS(EF(1578nm)-EF(1615nm))$	dB	< =0.3	0.110
IL@1550~1570nm	dB	>=5.5	15.29
IL@1620~1640nm	dB	>=5.5	8.0
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF7dB (21-40-0023-01)



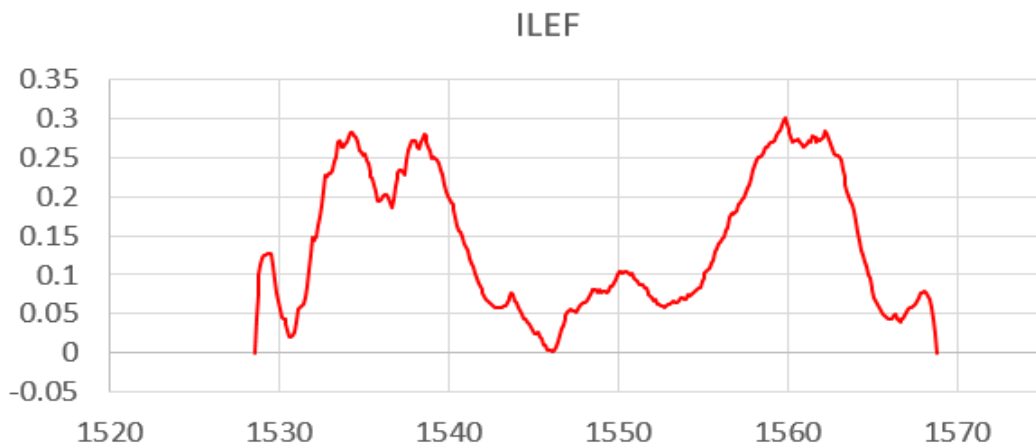
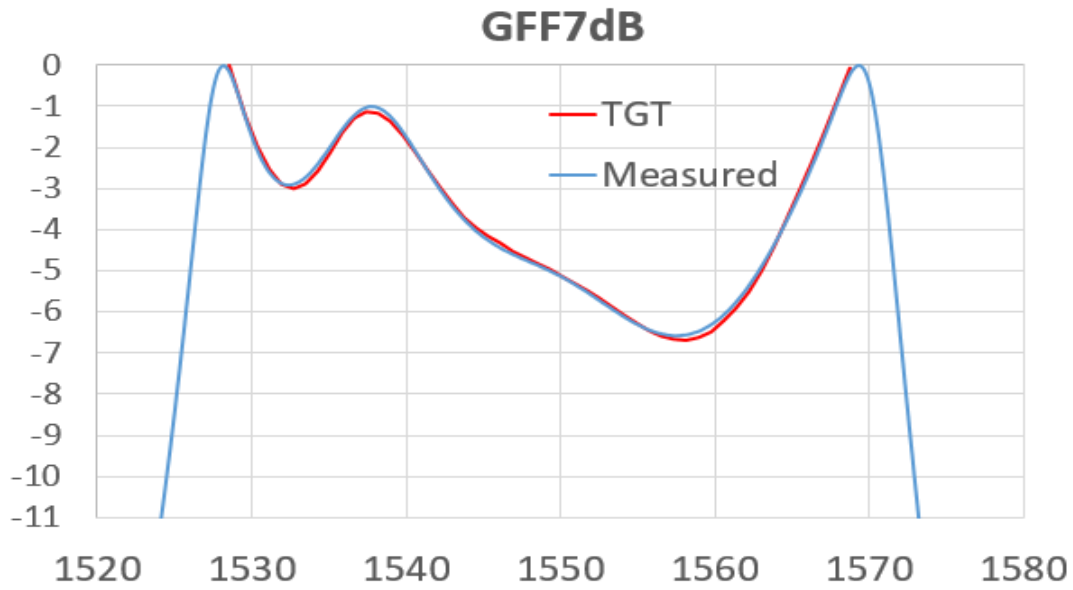
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1524-1572.3	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.15	0.1
Peak to Peak Error Function	dB	<= 0.3	0.207
Peak-to-peak in error function within 3.2nm bandwidth	dB	<= 0.25	0.19
Polarization Dependent Loss	dB	<= 0.1	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF7dB (21-40-0031-01)



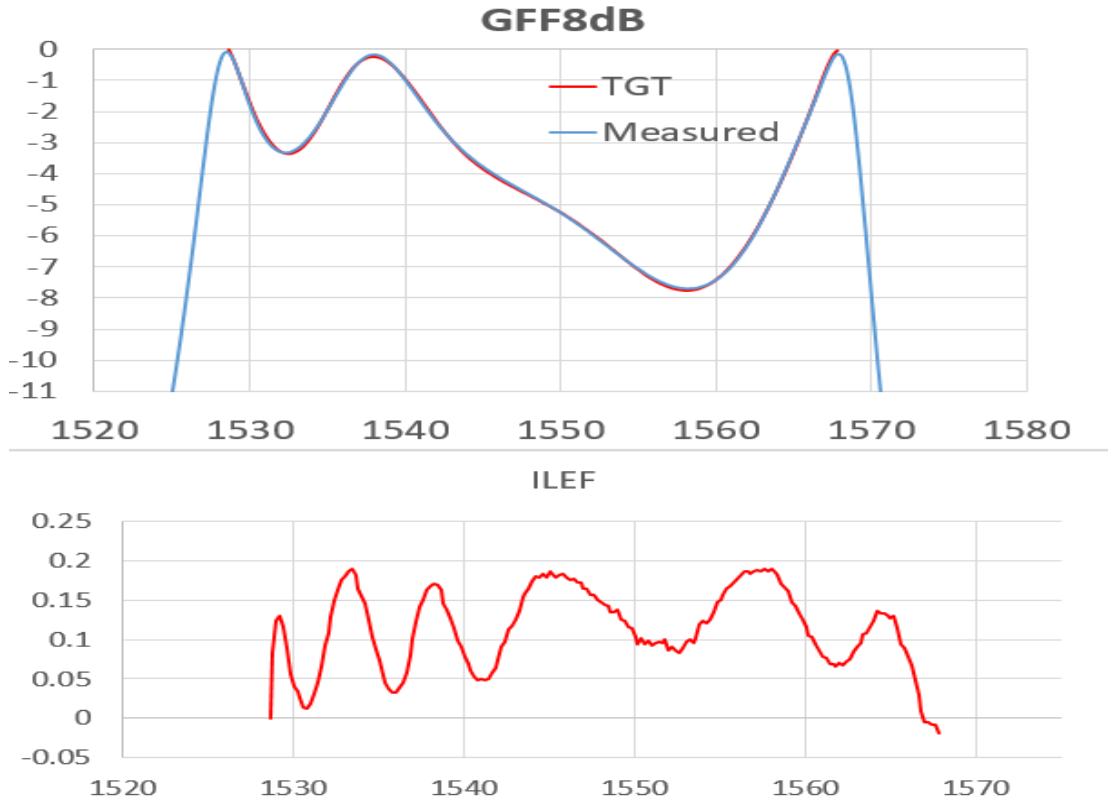
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1575-1618	
ILtgt	dB	See target GFF filter curve	
ILmin @1618nm	dB	<= 0.15	0.07
Peak to Peak Error Function	dB	<= 0.4	0.28
$\Delta EF1=ABS(EF(1575nm)-EF(1618nm))$	dB	< =0.25	0.008
$\Delta EF2=ABS(EF(1576nm)-EF(1617nm))$	dB	< =0.25	0.23
$\Delta EF3=ABS(EF(1577nm)-EF(1616nm))$	dB	< =0.25	0.20
IL@1550~1570nm	dB	>=5.5	10.8
IL@1622~1640nm	dB	>=5.5	13.7
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF7dB (21-40-0038-01)



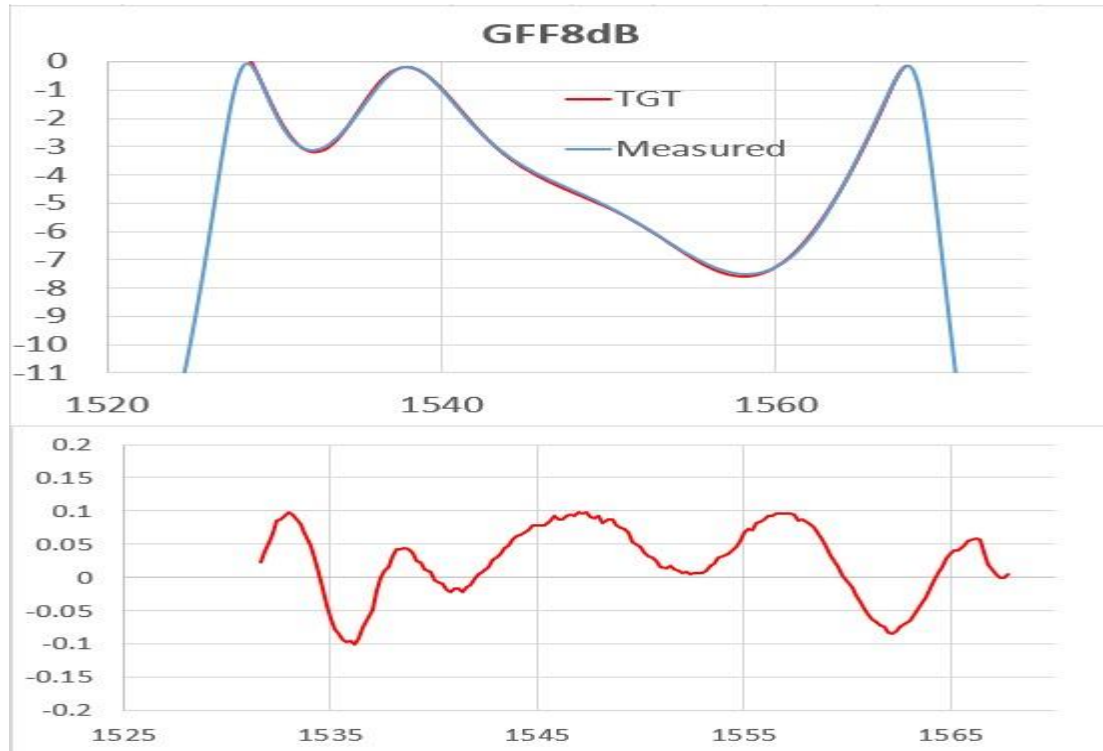
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1528.5-1568.8	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	≤ 0.15	0.1
Peak to Peak Error Function	dB	≤ 0.4	0.3
Polarization Dependent Loss	dB	≤ 0.1	
Thermal wavelength drift	pm/°C	≤ 1	
Reflection of Backside AR Coating	%	≤ 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0\pm 0.1)\times(1.0\pm 0.1)\times(1.0\pm 0.2)$	
Edge/Corner Chip	mm	≤ 0.1	
Scratch/Dig		40/20	

GFF8dB (21-40-0010-01)



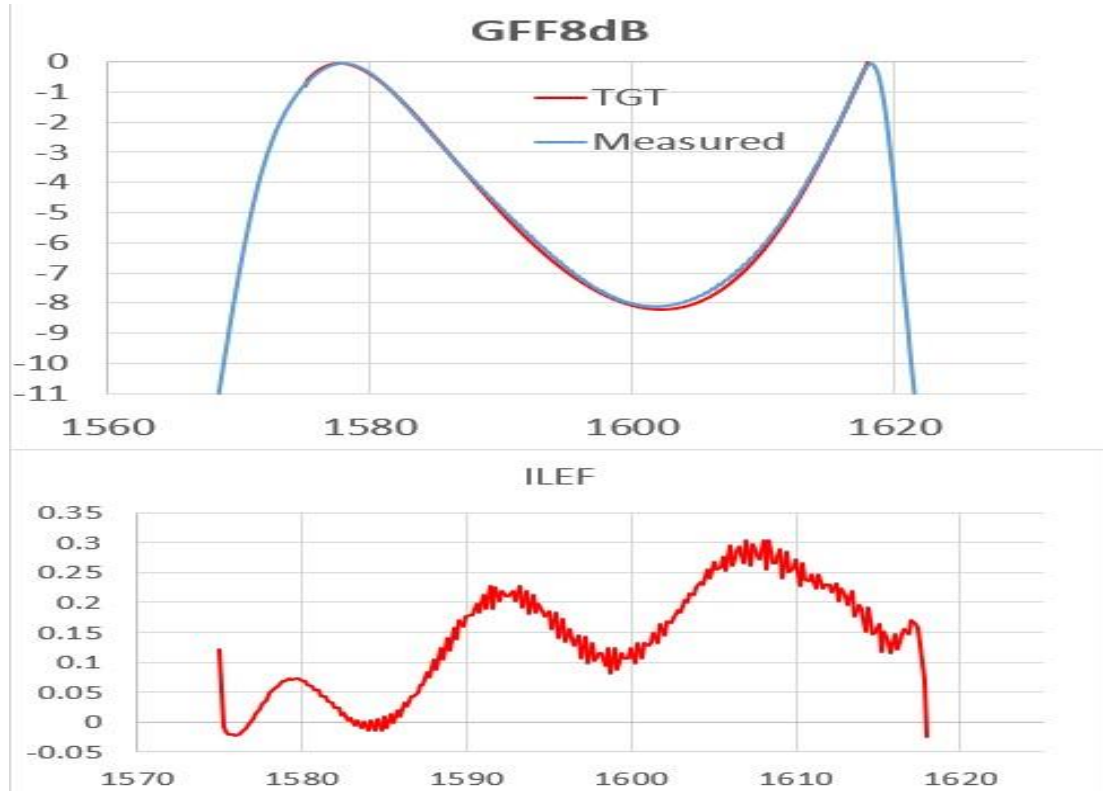
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1528.6-1567.8	
ILtgt	dB	See target GFF filter curve	
ILmin @1567.8nm	dB	<= 0.15	0.1
Peak to Peak Error Function	dB	<= 0.4	0.209
$\Delta EF1=ABS(EF(1529nm)-EF(1567nm))$	dB	< =0.3	0.127
$\Delta EF2=ABS(EF(1530nm)-EF(1566nm))$	dB	< =0.3	0.038
$\Delta EF3=ABS(EF(1531nm)-EF(1565nm))$	dB	< =0.3	0.107
IL@1480~1525nm	dB	>=4.5	11.2
IL@1572~1600nm	dB	>=4.5	17.7
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF8dB (21-40-0026-01)



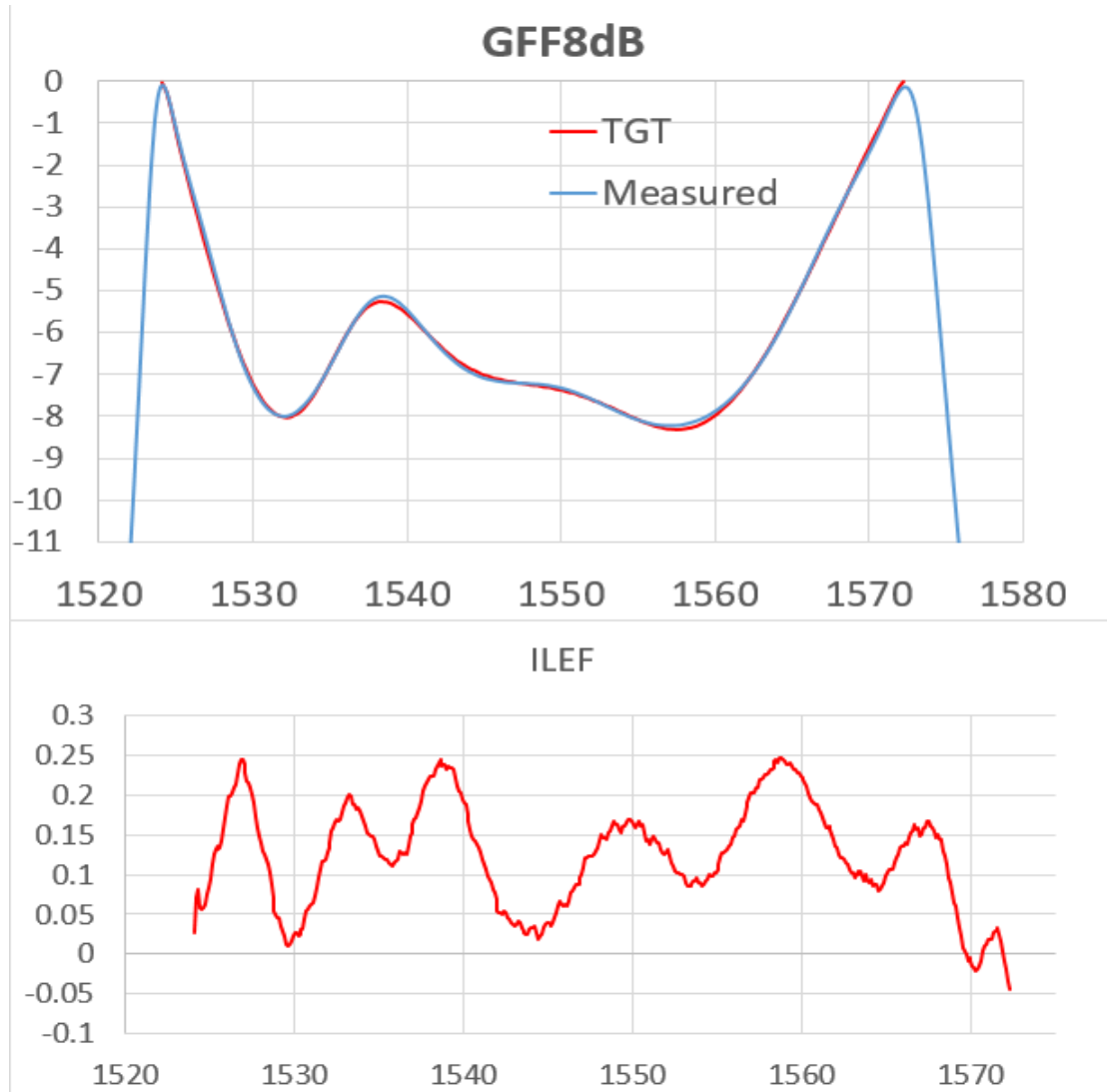
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1528.6-1567.8	
ILtgt	dB	See target GFF filter curve	
ILmin @1567.8nm	dB	<= 0.15	0.1
Peak to Peak Error Function	dB	<= 0.4	0.2
$\Delta EF1=ABS(EF(1529nm)-EF(1567nm))$	dB	< =0.2	0.01
$\Delta EF2=ABS(EF(1530nm)-EF(1566nm))$	dB	< =0.2	0.085
$\Delta EF3=ABS(EF(1531nm)-EF(1565nm))$	dB	< =0.2	0.061
IL@1480~1525nm	dB	>=4.5	10.1
IL@1572~1600nm	dB	>=4.5	16.8
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF8dB (21-40-0030-01)



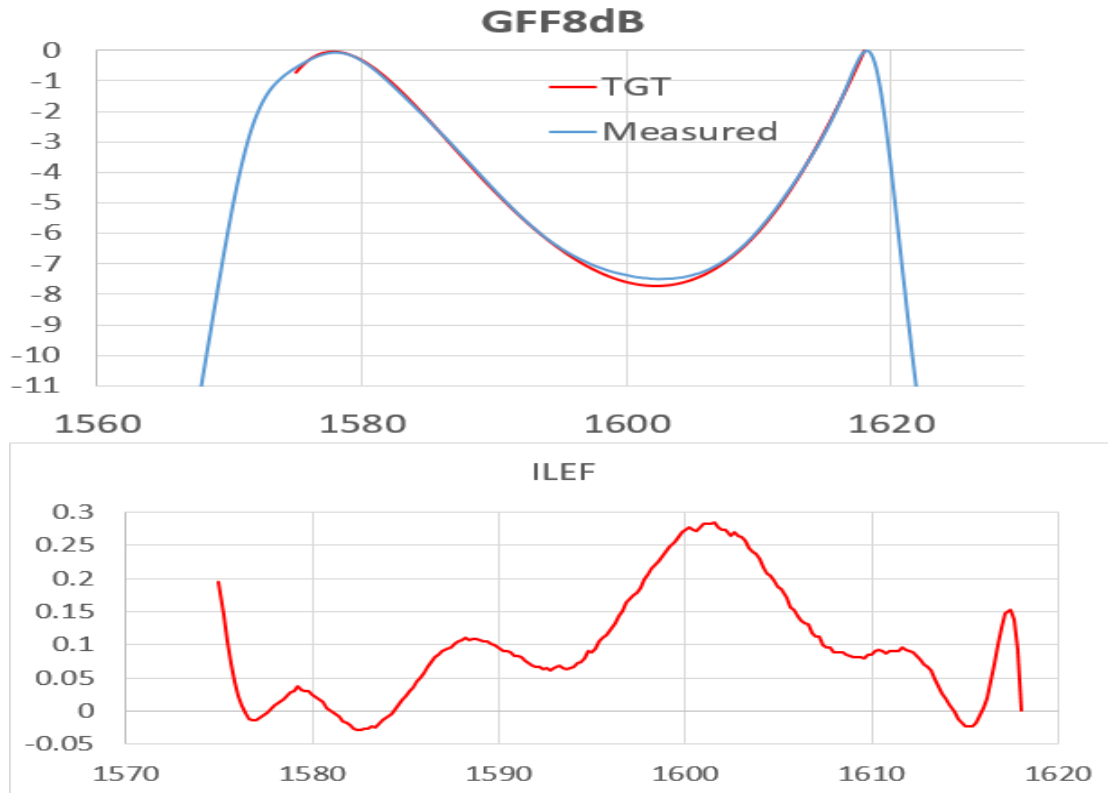
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1575-1618	
ILtgt	dB	See target GFF filter curve	
ILmin @1618nm	dB	<= 0.15	0.06
Peak to Peak Error Function	dB	<= 0.4	0.32
$\Delta EF1=ABS(EF(1575nm)-EF(1618nm))$	dB	< =0.25	0.14
$\Delta EF2=ABS(EF(1576nm)-EF(1617nm))$	dB	< =0.25	0.19
$\Delta EF3=ABS(EF(1577nm)-EF(1616nm))$	dB	< =0.25	0.14
IL@1550~1570nm	dB	>=5.5	7.0
IL@1622~1640nm	dB	>=5.5	13.5
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF8dB (21-40-0040-01)



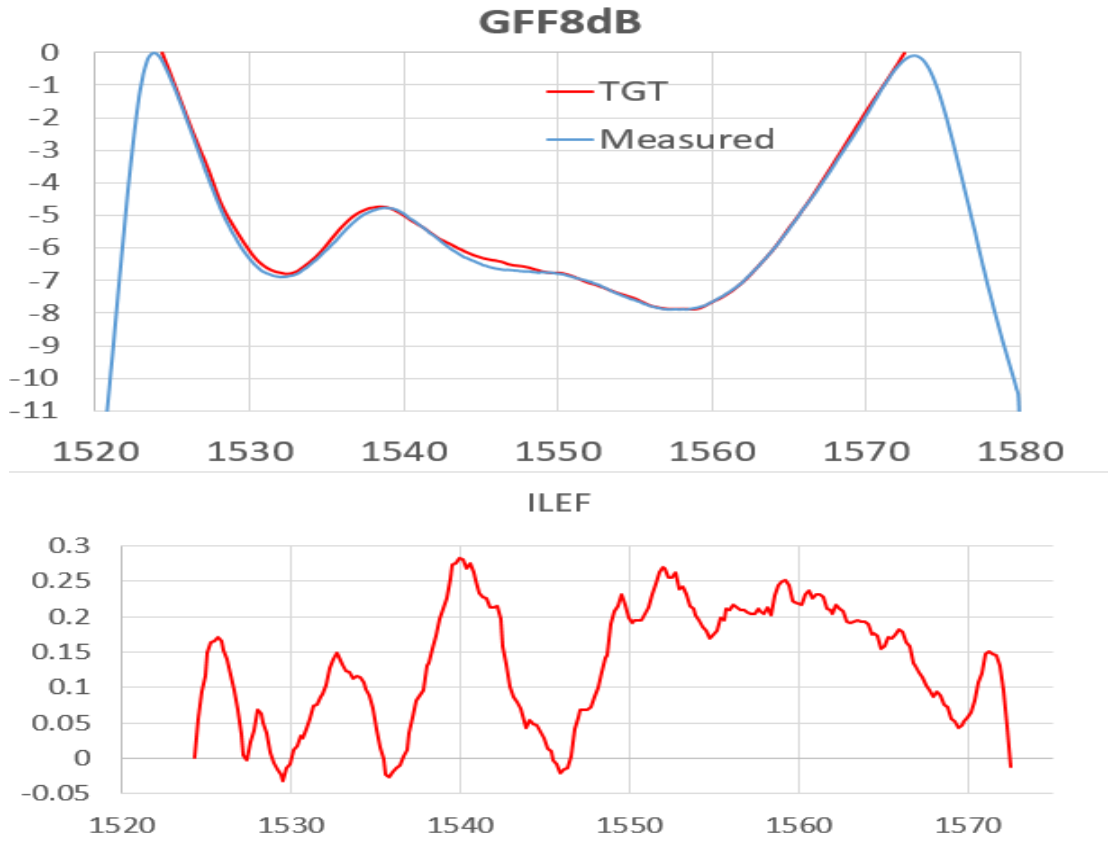
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1524.1-1572.3	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.15	0.1
Peak to Peak Error Function	dB	<= 0.35	0.29
Polarization Dependent Loss	dB	<= 0.1	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF8dB (21-40-0048-01)



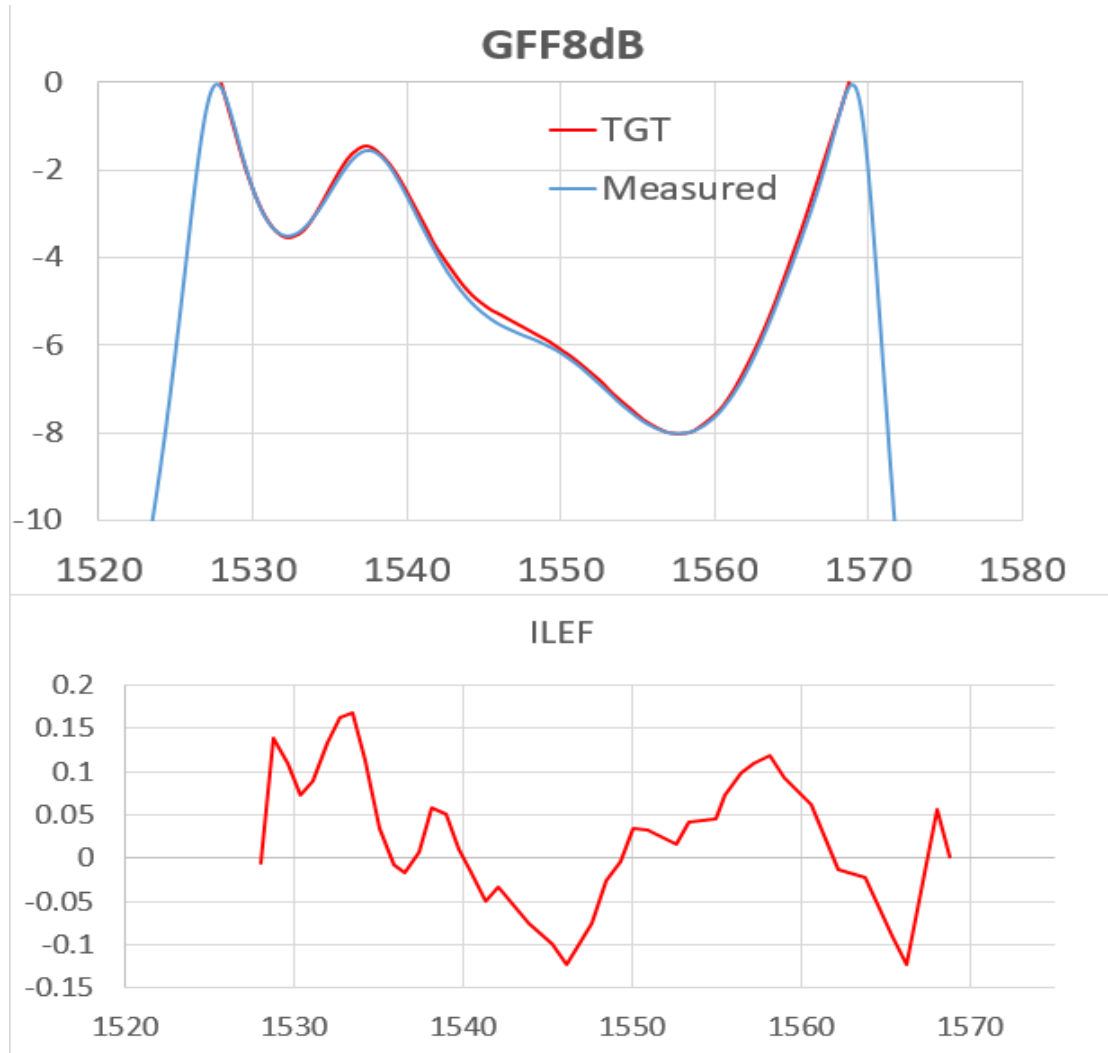
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1575-1618	
ILtgt	dB	See target GFF filter curve	
ILmin @1618nm	dB	<= 0.15	0.05
Peak to Peak Error Function	dB	<= 0.45	0.31
$\Delta EF1=ABS(EF(1575nm)-EF(1618nm))$	dB	< =0.25	0.19
$\Delta EF2=ABS(EF(1576nm)-EF(1617nm))$	dB	< =0.25	0.10
$\Delta EF3=ABS(EF(1577nm)-EF(1616nm))$	dB	< =0.25	0.019
IL@1550~1570nm	dB	>=5.5	5.9
IL@1622~1640nm	dB	>=5.5	11.3
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF8dB (21-40-0050-01)



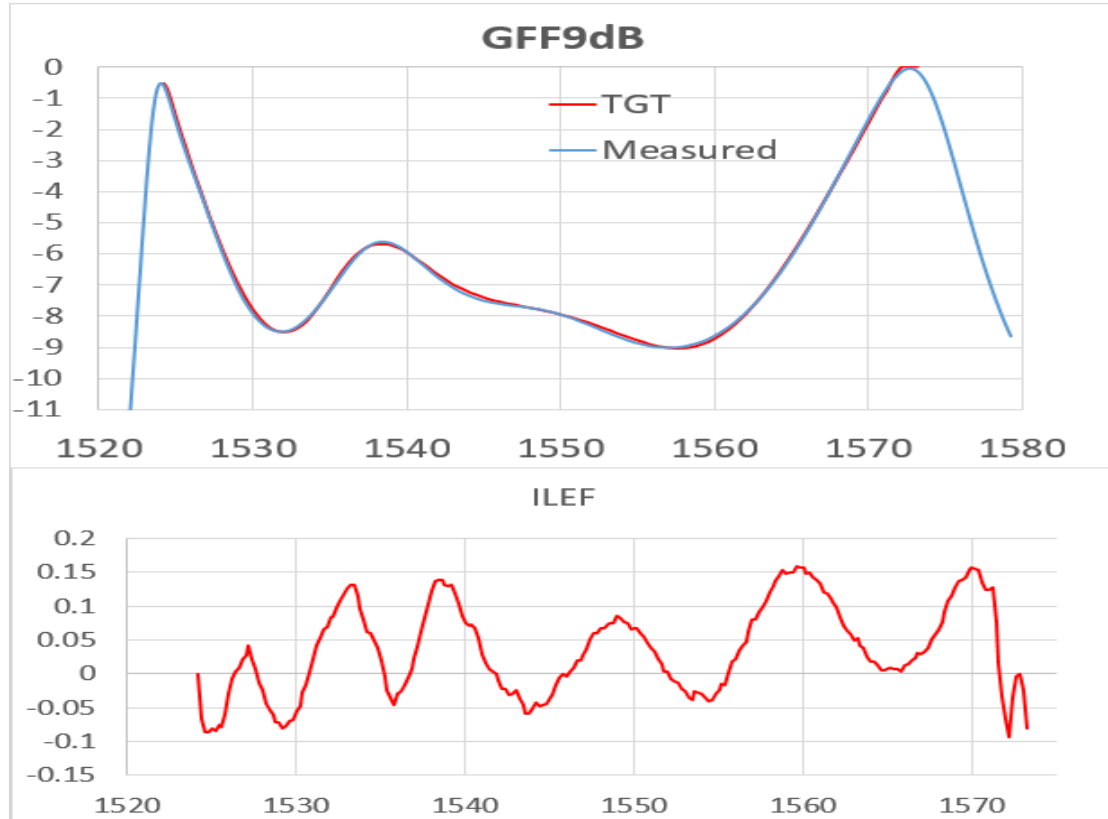
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1524.191-1572.463	
ILtgt	dB	See target GFF filter curve	
MRILEF	dB	0-0.3	0.092
Peak to Peak Error Function	dB	<= 0.4	0.31
MAX Local Slope@25GHZ	dB	< =0.5	0.28
IL@1523.4-1524.3nm	dB	< =0.45	0.15
IL@1572.5-1573.5nm	dB	< =0.35	0.19
Polarization Dependent Loss	dB	<= 0.09	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.002	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	1.3~3.3	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.4+/-0.1)*(1.4+/-0.1)*(1.0+/-0.2)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF8dB (21-40-0054-01)



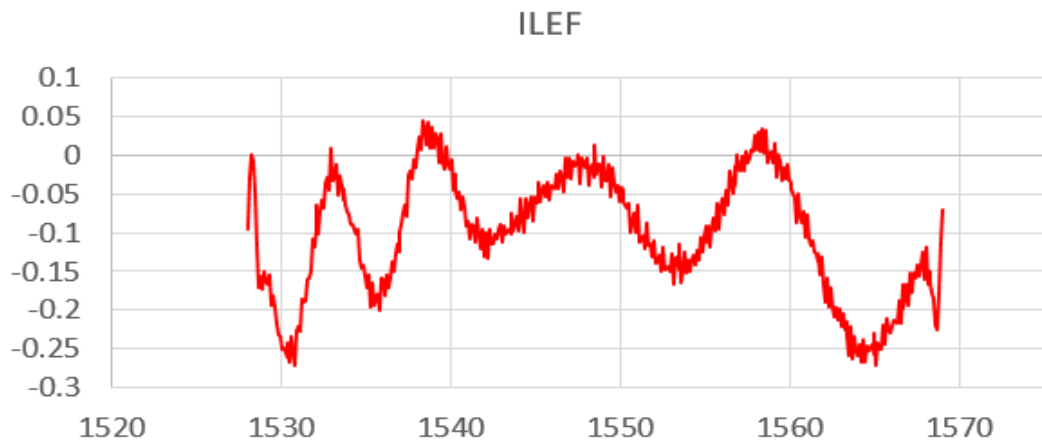
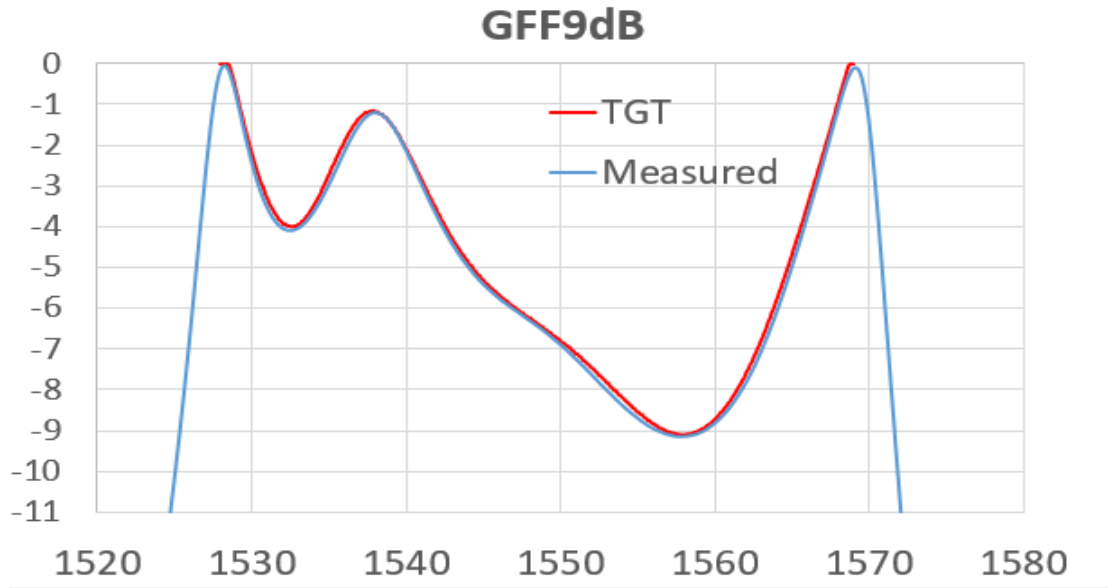
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1528-1568.744	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.2	0.1
Peak to Peak Error Function	dB	<= 0.4	0.29
Polarization Dependent Loss	dB	<= 0.1	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2.5~4.5	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(0.9+/-0.1)*(0.9+/-0.1)*(1.0+/-0.1)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF9dB (21-40-0014-01)



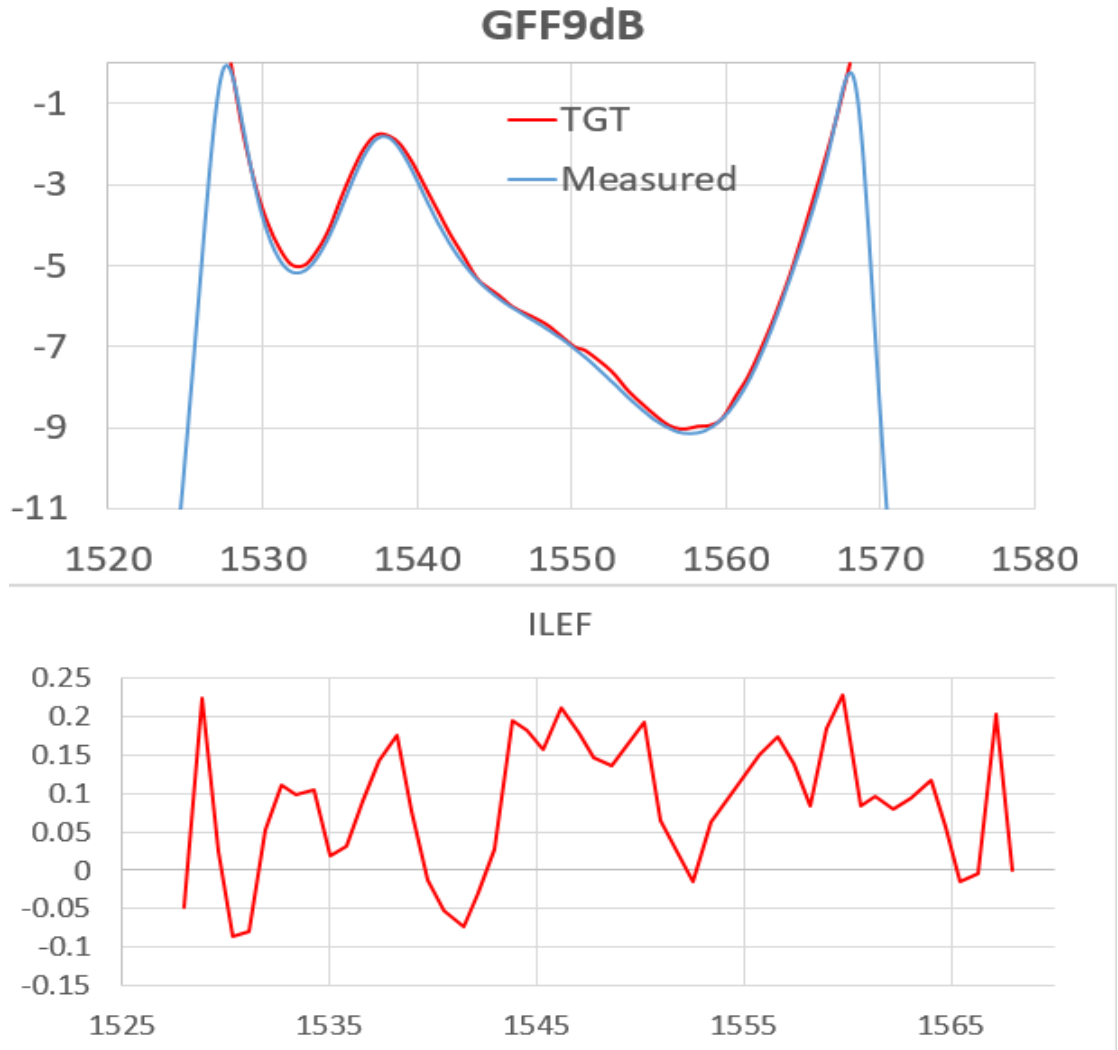
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1524.2-1573.2	
ILtgt	dB	See target GFF filter curve	
ILmin @1573.2nm	dB	<= 0.15	0.056
Peak to Peak Error Function	dB	<= 0.4	0.252
$\Delta EF1=ABS(EF(1525nm)-EF(1572nm))$	dB	< =0.3	0.014
$\Delta EF2=ABS(EF(1526nm)-EF(1571nm))$	dB	< =0.3	0.153
$\Delta EF3=ABS(EF(1527nm)-EF(1570nm))$	dB	< =0.3	0.129
IL@1480~1520nm	dB	>=4.5	22.2
IL@1577~1600nm	dB	>=4.5	5.3
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF9dB (21-40-0045-01)



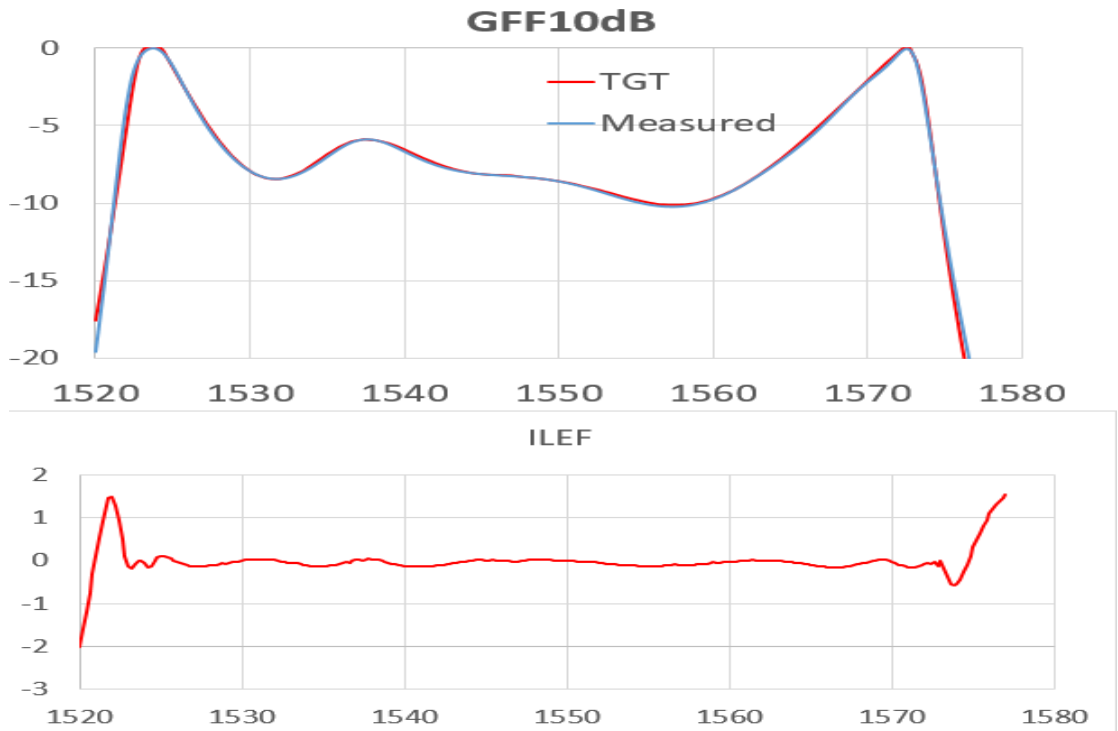
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1528-1569	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	≤ 0.15	0.06
Peak to Peak Error Function @1529-1568.2nm	dB	≤ 0.4	0.31
Polarization Dependent Loss	dB	≤ 0.1	
Thermal wavelength drift	pm/°C	≤ 1	
Reflection of Backside AR Coating	%	≤ 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0\pm 0.1)\times(1.0\pm 0.1)\times(1.0\pm 0.2)$	
Edge/Corner Chip	mm	≤ 0.1	

GFF9dB (21-40-0053-01)



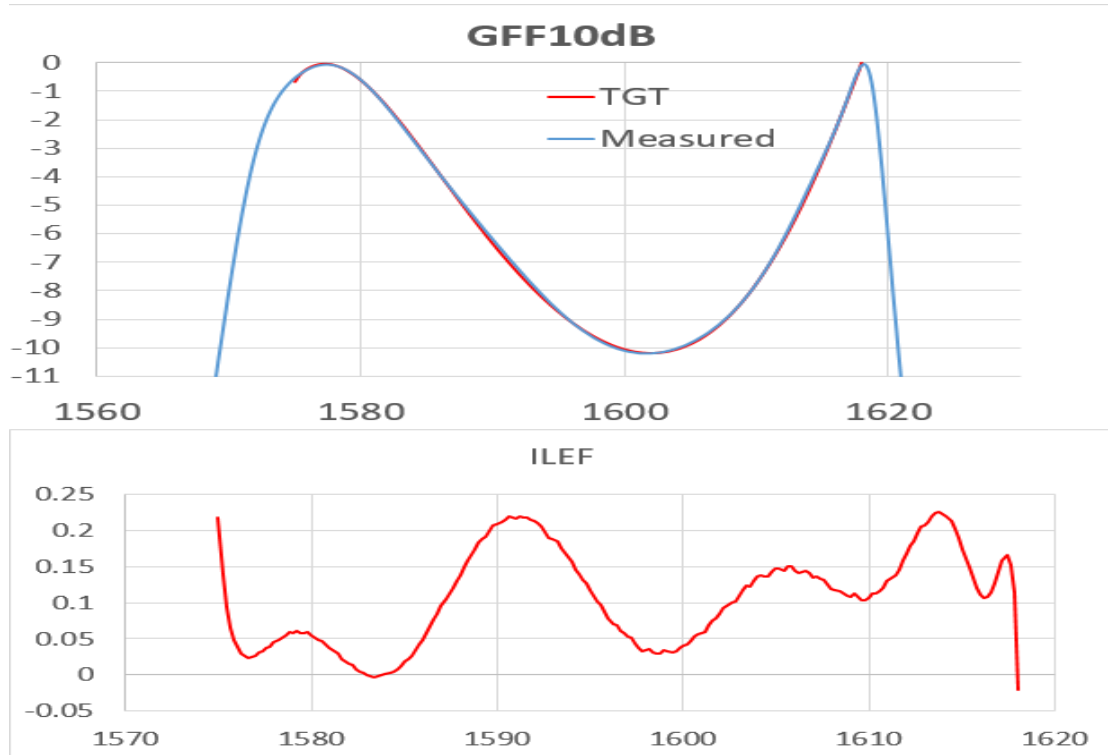
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1528-1568	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.2	0.05
Peak to Peak Error Function	dB	<= 0.4	0.31
Polarization Dependent Loss	dB	<= 0.1	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2.5~4.5	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.1)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF10dB (21-40-0008-01)



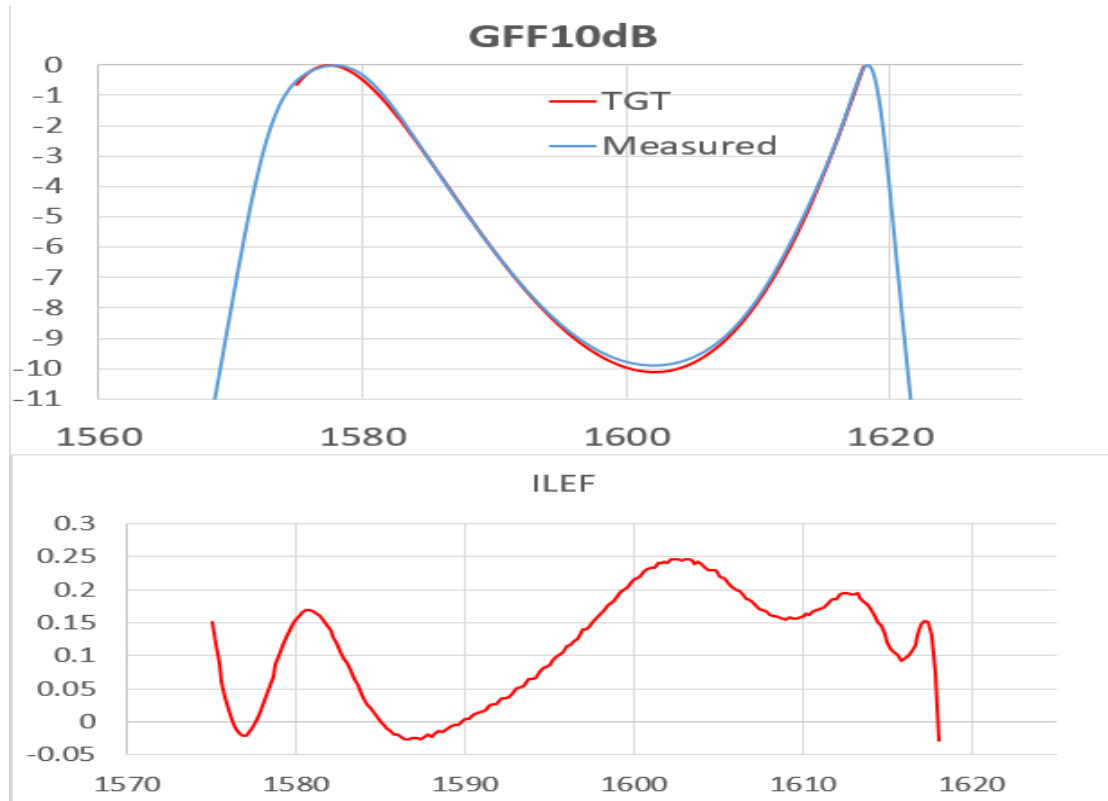
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1520-1577	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.3	0.013
Peak to Peak Error Function@1523~1573nm	dB	<= 0.6	0.28
Peak-to-peak in error function (dB)[1] @1520~1522.8nm&1573.2~1577nm	dB	<5	3.54
$\Delta EF1=ABS(EF(1529nm)-EF(1567nm))$	dB	< =0.4	0.175
$\Delta EF2=ABS(EF(1530nm)-EF(1566nm))$	dB	< =0.4	0.143
$\Delta EF3=ABS(EF(1531nm)-EF(1565nm))$	dB	< =0.4	0.128
IL@1480~1520nm	dB	>=5	17.6
IL@1577~1610nm	dB	>=5	23.3
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF10dB (21-40-0032-01)



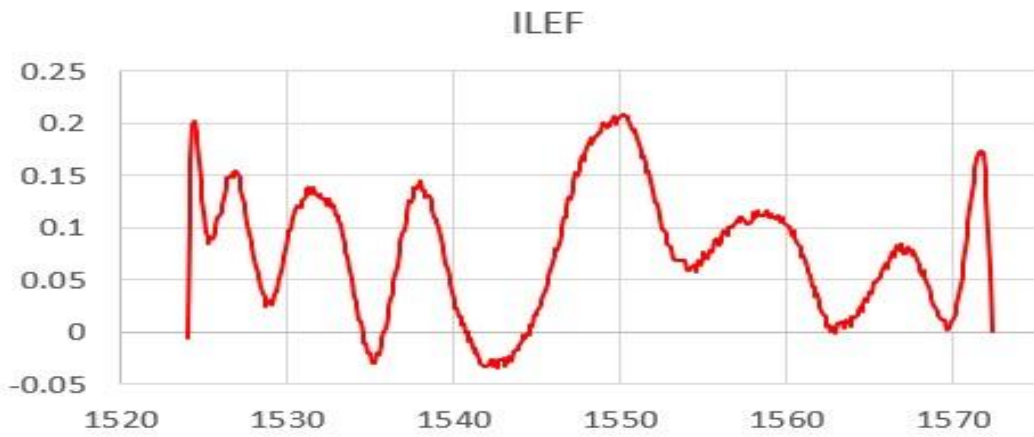
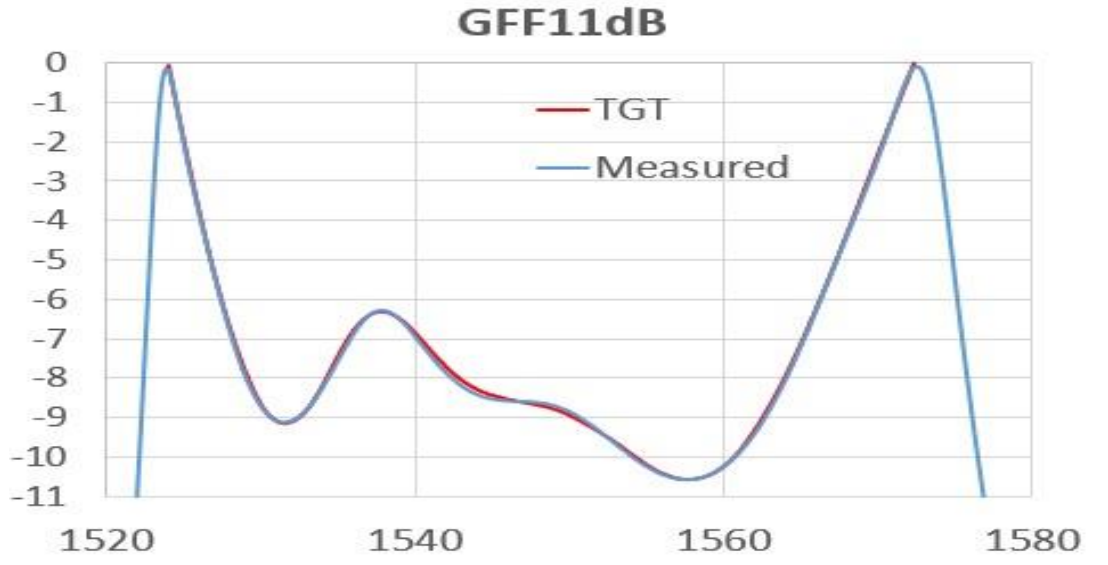
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1575-1618	
ILtgt	dB	See target GFF filter curve	
ILmin @1618nm	dB	<= 0.15	0.075
Peak to Peak Error Function	dB	<= 0.4	0.246
$\Delta EF1=ABS(EF(1575nm)-EF(1618nm))$	dB	< =0.25	0.22
$\Delta EF2=ABS(EF(1576nm)-EF(1617nm))$	dB	< =0.25	0.10
$\Delta EF3=ABS(EF(1577nm)-EF(1616nm))$	dB	< =0.25	0.08
IL@1550~1570nm	dB	>=5.5	8.0
IL@1622~1640nm	dB	>=5.5	15.8
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF10dB (21-40-0049-01)



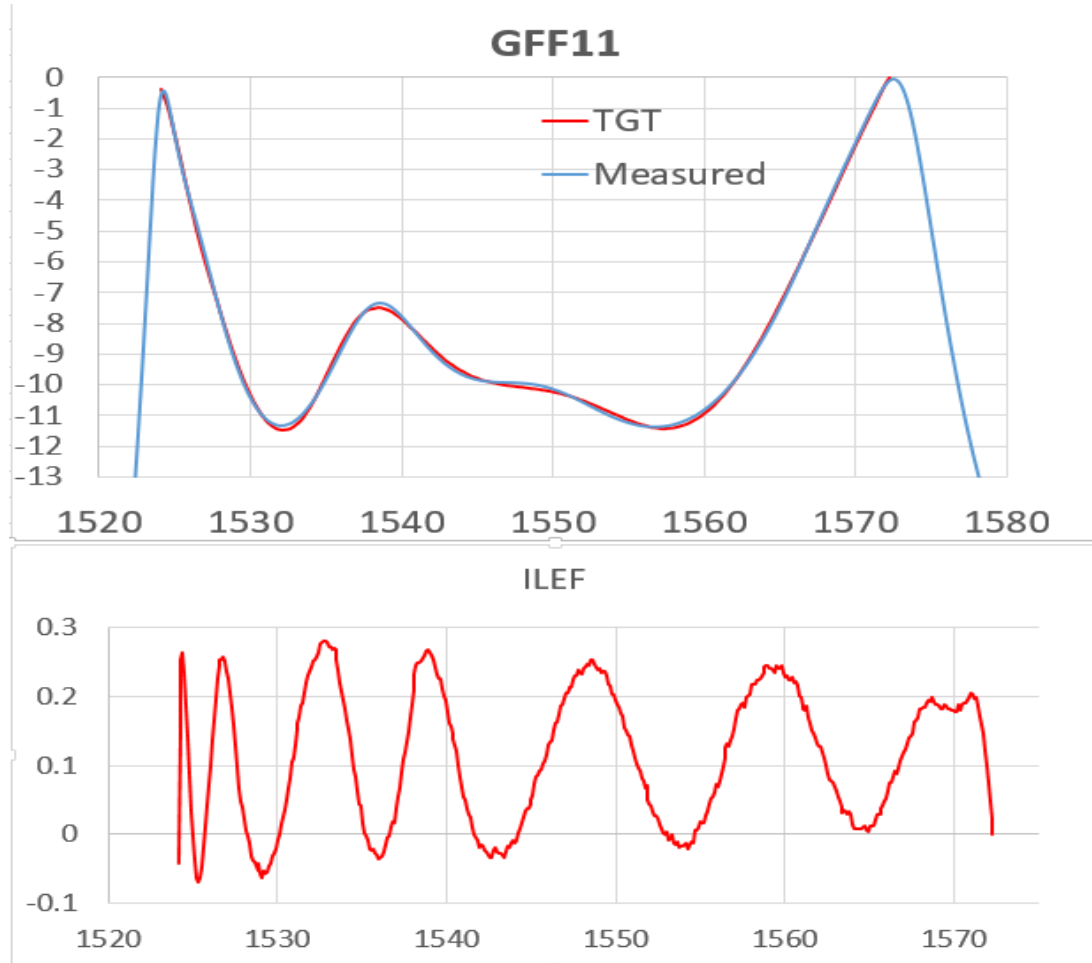
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1575-1618	
ILtgt	dB	See target GFF filter curve	
ILmin @1618nm	dB	<= 0.15	0.057
Peak to Peak Error Function	dB	<= 0.45	0.27
$\Delta EF1=ABS(EF(1575nm)-EF(1618nm))$	dB	<=0.25	0.18
$\Delta EF2=ABS(EF(1576nm)-EF(1617nm))$	dB	<=0.25	0.12
$\Delta EF3=ABS(EF(1577nm)-EF(1616nm))$	dB	<=0.25	0.11
IL@1550~1570nm	dB	>=5.5	8.1
IL@1622~1640nm	dB	>=5.5	13.0
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF11dB (21-40-0022-01)



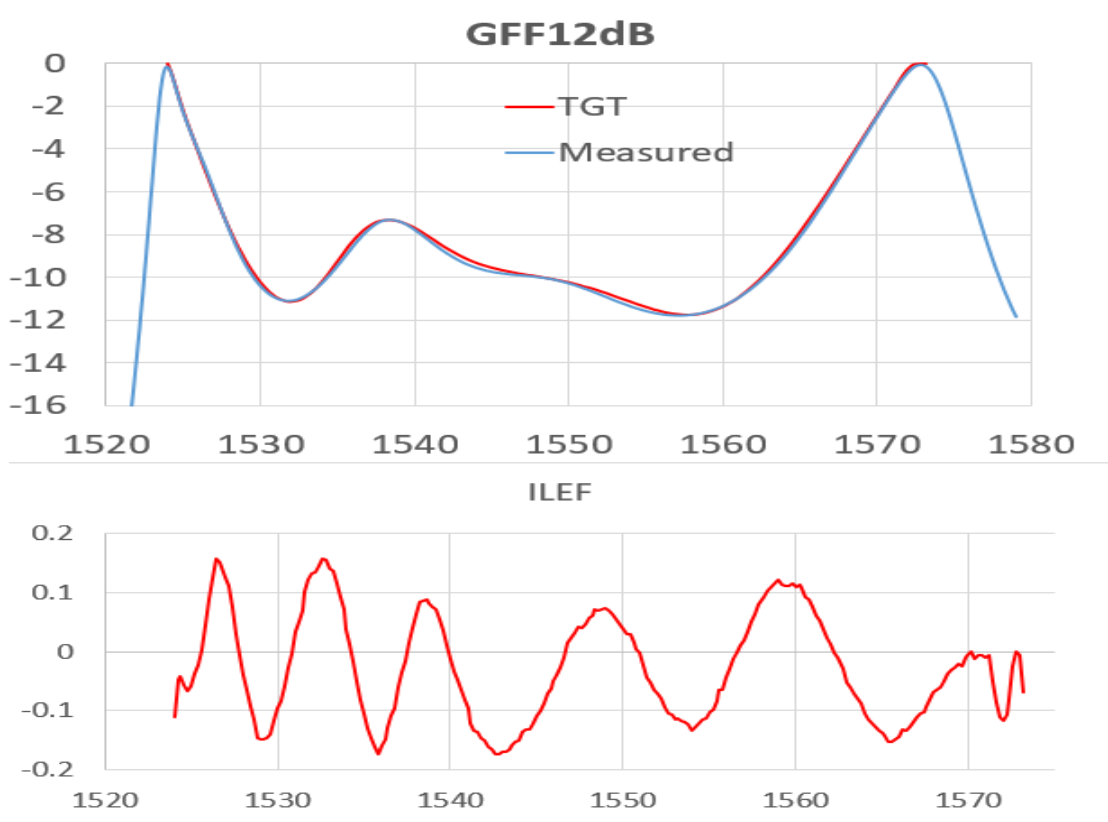
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1524-1572.3	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.15	0.088
Peak to Peak Error Function	dB	<= 0.3	0.243
Polarization Dependent Loss	dB	<= 0.1	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF11dB (21-40-0041-01)



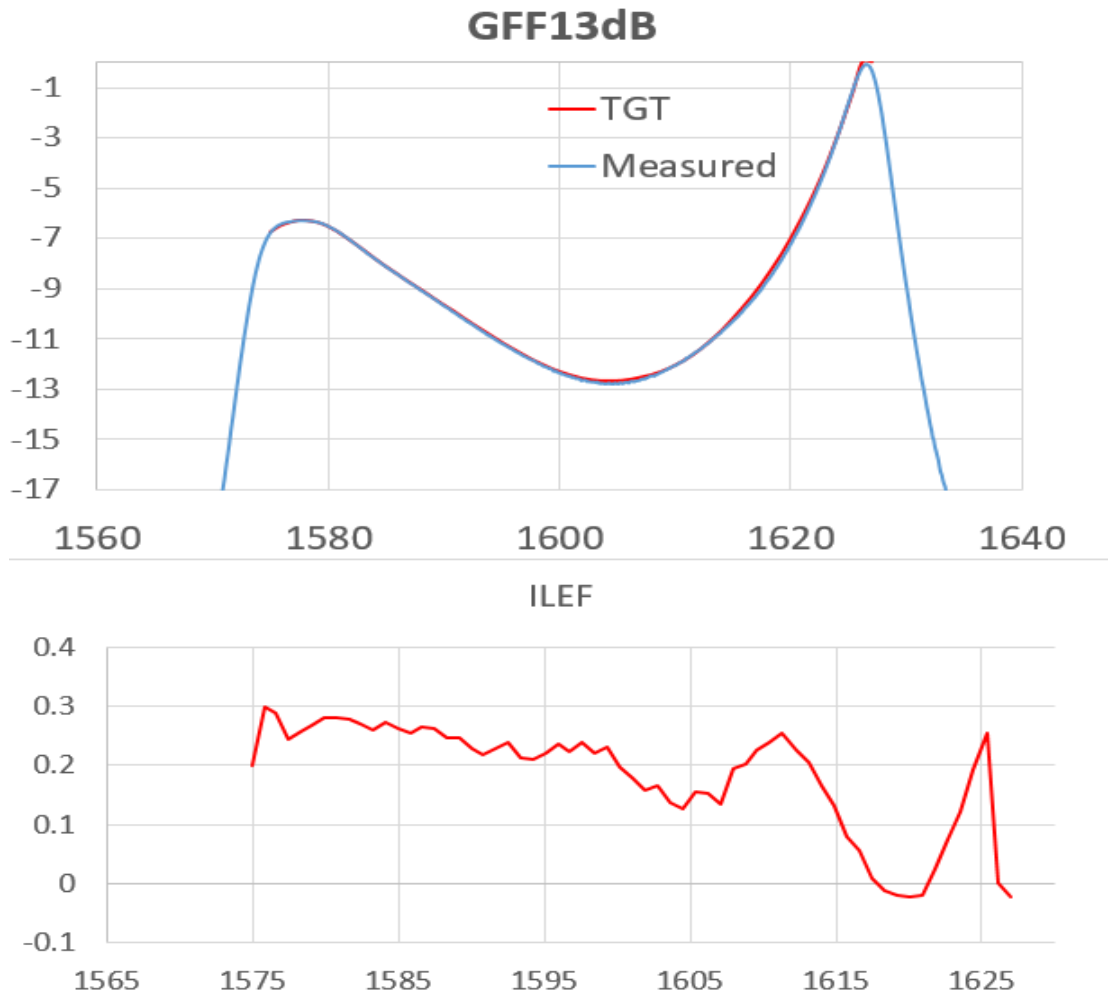
Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1524.11-1572.27	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.15	0.11
Peak to Peak Error Function	dB	<= 0.7	0.35
Polarization Dependent Loss	dB	<= 0.1	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

GFF12dB (21-40-0052-01)



Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1524-1573.3	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.3	0.06
Peak to Peak Error Function	dB	<= 0.6	0.33
$\Delta EF1=ABS(EF(1524nm)-EF(1572nm))$	dB	< =0.4	0.007
$\Delta EF2=ABS(EF(1525nm)-EF(1571nm))$	dB	< =0.4	0.048
$\Delta EF3=ABS(EF(1526nm)-EF(1570nm))$	dB	< =0.4	0.093
IL@1480~1520nm	dB	>=4.5	25.4
IL@1577~1600nm	dB	>=4.5	8.1
Polarization Dependent Loss	dB	<= 0.1	
Polarization Mode Dispersion	ps	<=0.05	
Thermal stability	dB/°C	<=0.001	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2~4	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	$(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.2)$	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

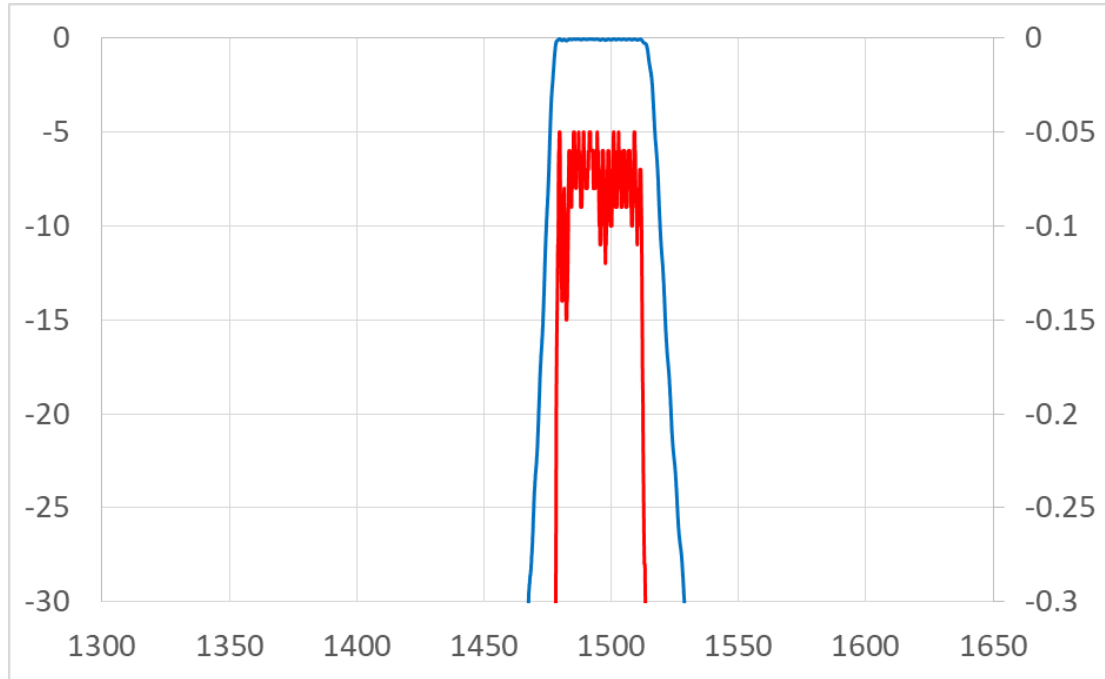
GFF13dB (21-40-0051-01)



Parameters	Unit	Specifications	图例/Example
Target Wavelength Range	nm	1574.13-1626.17	
ILtgt	dB	See target GFF filter curve	
ILmin in target wavelength Range	dB	<= 0.2	0.06
Peak to Peak Error Function @1574-1626nm	dB	<= 0.43	0.32
Polarization Dependent Loss	dB	<= 0.1	
Thermal wavelength drift	pm/°C	<=1	
Reflection of Backside AR Coating	%	<= 0.2	
Entrance and Exit Media		Air	
AOI(Angle Tuning)	degree	2.5~4.5	
Wedge Angle	degree	0.2~0.6	
Size (Length*Width*Thickness)	mm	(1.0+/-0.1)*(1.0+/-0.1)*(1.0+/-0.1)	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		40/20	

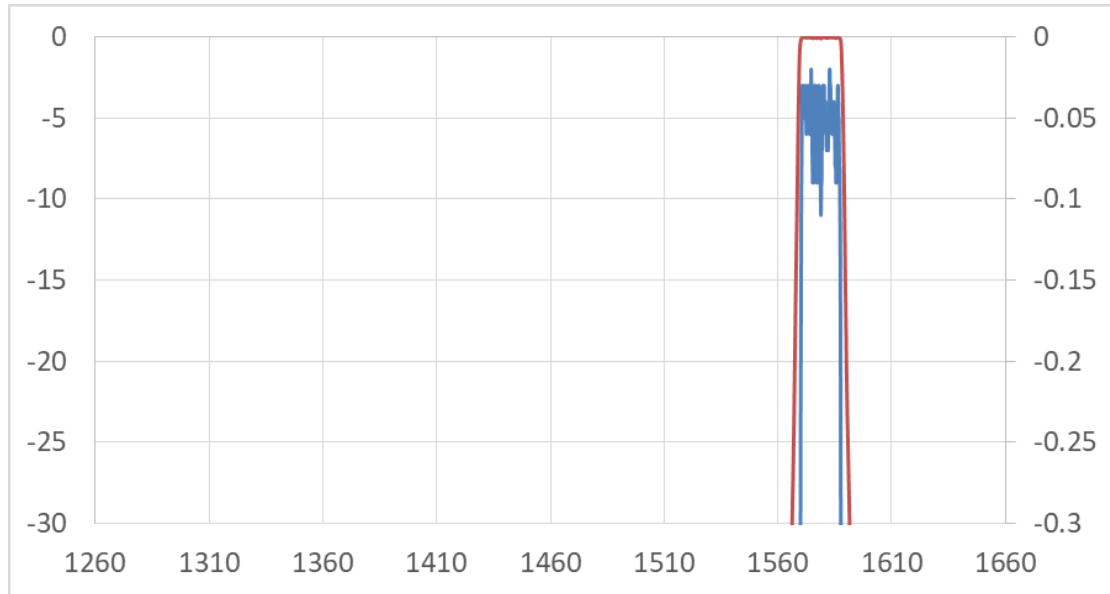
【接入网/ACCESS】

2.5G_BPF1490



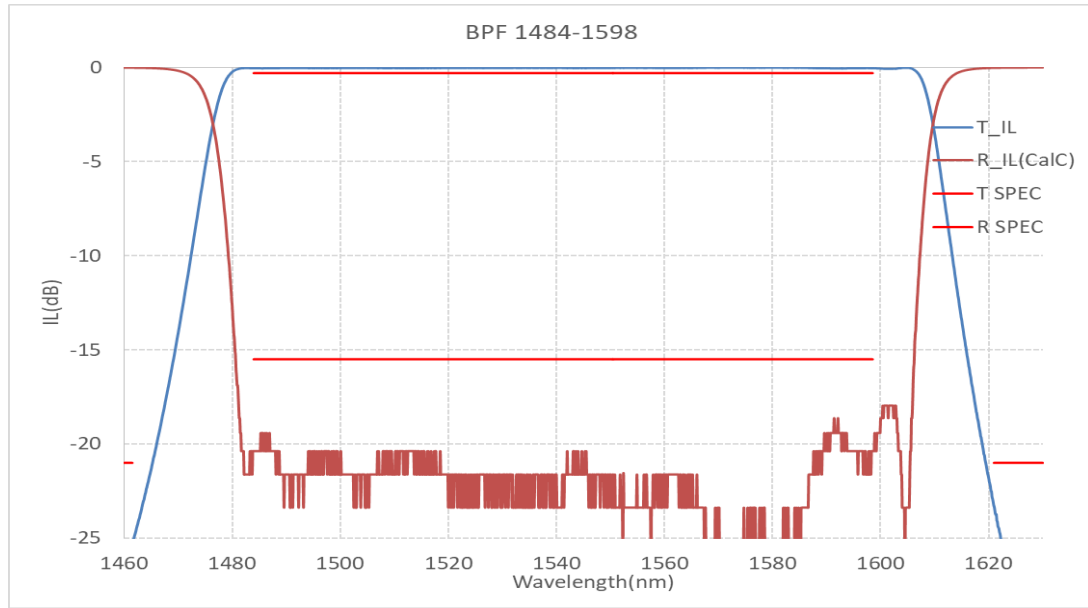
Parameters	Unit	Specifications
Operation Wavelength	nm	1260~1675
AOI in Air	degree	0
Pass Band Wavelength	nm	1480~1502
Stop Band1 Wavelength	nm	1280~1450&1540~1660
Stop Band2 Wavelength	nm	1450~1460&1530~1540
Pass Band IL	dB	≤ 0.25
Pass Isolation@Stop Band1	dB	≥ 40
Pass Isolation@Stop Band2	dB	≥ 30
Reflection of Backside AR Coating	%	≤ 0.2
Size (Length*Width*Thickness)	mm	1.4* 1.4* 0.3 or others
Edge/Corner Chip	mm	≤ 0.1
Scratch/Dig		40 / 20

10G_BPF1577



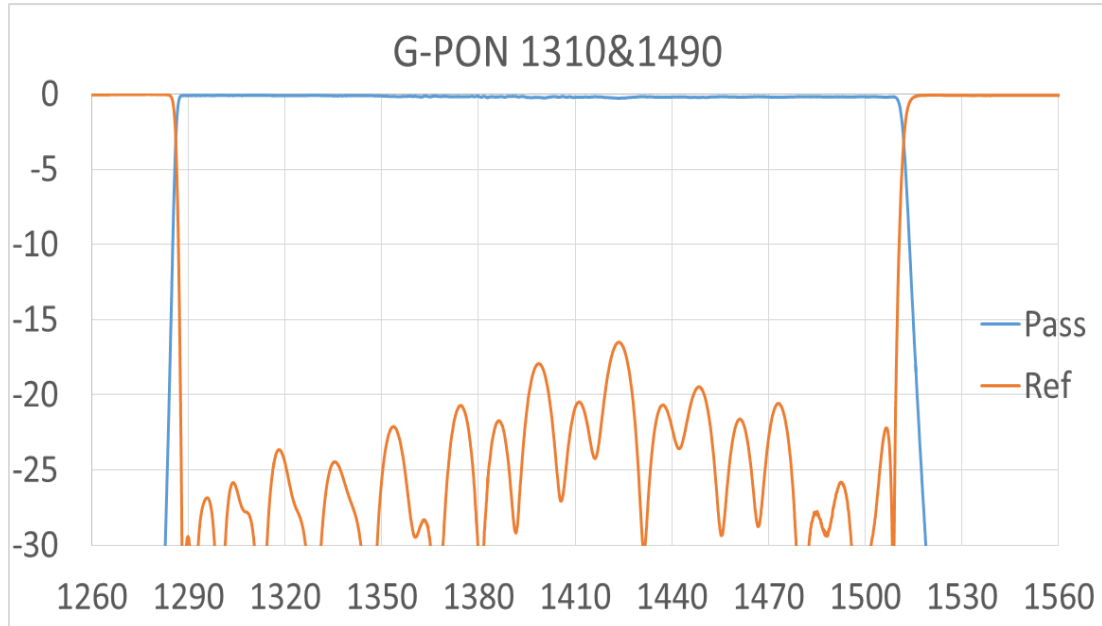
Parameters	Unit	Specifications
Operation Wavelength	nm	1260~1675
AOI in Air	degree	0
Pass Band Wavelength	nm	1574~1586
Stop Band1 Wavelength	nm	1250~1555
Stop Band2 Wavelength	nm	1555~1564&1596~1660
Pass Band IL	dB	<0.3
Pass Isolation@Stop Band1	dB	>35
Pass Isolation@Stop Band2	dB	>30
Size (Length*Width*Thickness)	mm	1.4* 1.4* 0.3 or others
Edge/Corner Chip	mm	<= 0.1
Scratch/Dig		40 / 20

BPF 1484-1598



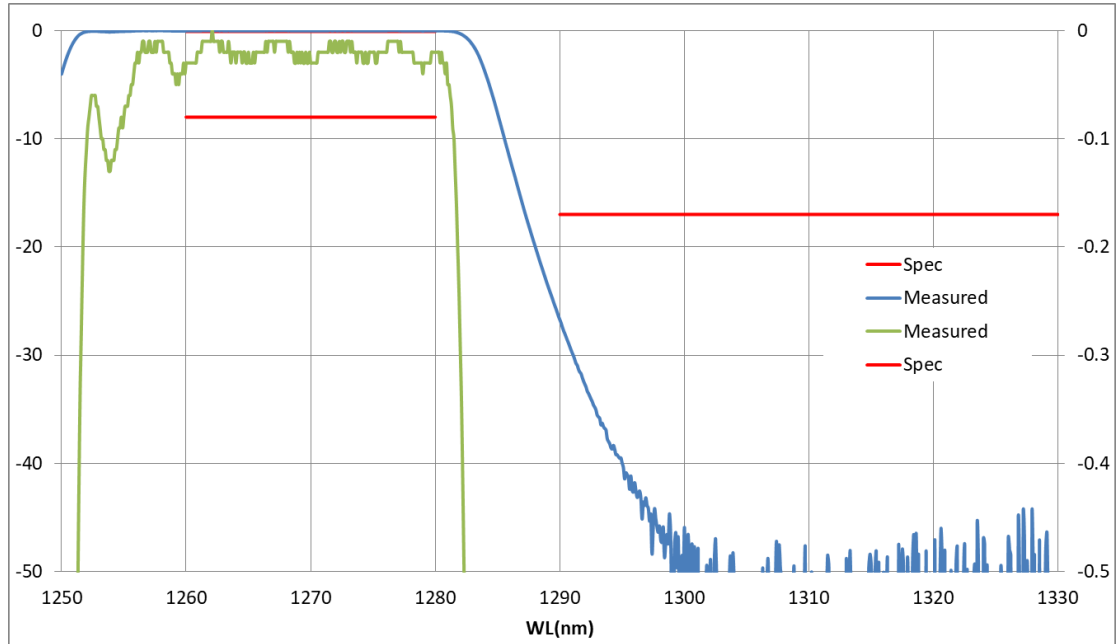
Central Wavelength	Unit	BPF 1484-1598	图例/Example
Wavelength Range	nm	1260-1640	
Pass Band	nm	1484~1598.5	
Reflection Band	nm	1260~1461.5 & 1621-1640	
Max Insertion Loss within Pass Band	dB	0.3	0.11
Max Insertion Loss within Reflection Band	dB	0.25	0.1
Pass band Ripple	dB	0.3	0.06
Pass Isolation@Reflection Band	dB	21	23.25
Reflection Isolation@Pass Band	dB	15.5	18.63
PDL	dB	0.1	
Reflection AR Coating On Backside at Passband	%	< 0.2	
Wavelength Temperature Sensitivity:	pm/°C	1	
Operating Temperature		-40~ +85°C	
Storage Temperature		-40~ +85°C	
Size (Length*Width*Thickness)	mm	TBD	

G-PON 1310+1490



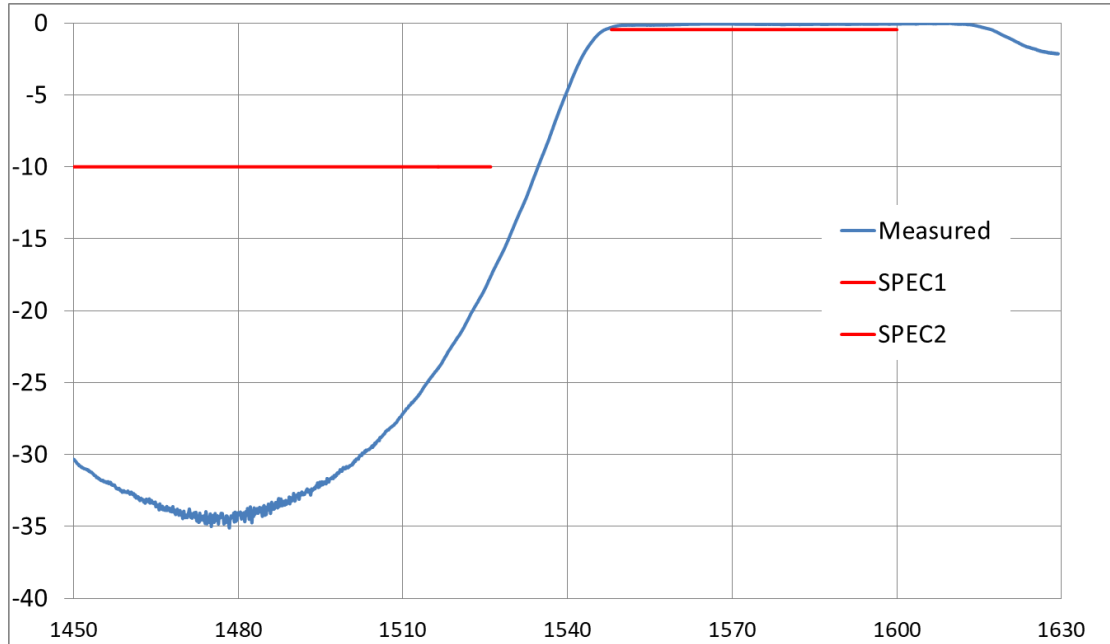
Parameters	Unit	Specifications	图例 /Example
Operation Wavelength	nm	1260~1650	
Angle of Incident	degree	1.8	
Pass Band Width	nm	1290-1330,1480-1500	
Stop Band Width	nm	1260-1280,1524-1650	
Transmission Isolation 1260-1280	dB	30	48.5
Transmission Isolation 1524-1650	dB	30	41.8
Max IL within PassBand	dB	<= 0.3	0.15
Ripple within 1290-1330	dB	<= 0.25	0.035
Ripple within 1480-1500	dB	<= 0.25	0.033
Reflection Isolation	dB	>= 15.0 or 20.0	23.8
Max IL within StopBand	dB	<= 0.2	0.08
Ripple within StopBand	dB	<= 0.15	0.05
Polarization Dependent Loss within PassBand	dB	<= 0.1	
Reflection of Backside AR Coating	%	<= 0.2	
Size (Length*Width*Thickness)	mm	$(1.4\pm 0.1) \times (1.4\pm 0.1) \times (1.0\pm 0.2)$ $(1.2\pm 0.1) \times (1.2\pm 0.1) \times (1.0\pm 0.2)$	
Wedge Angle	degree	0.2	
Edge/Corner Chip	mm	<= 0.1	
Scratch/Dig		60 / 40	

Combo_PON_SPF1280



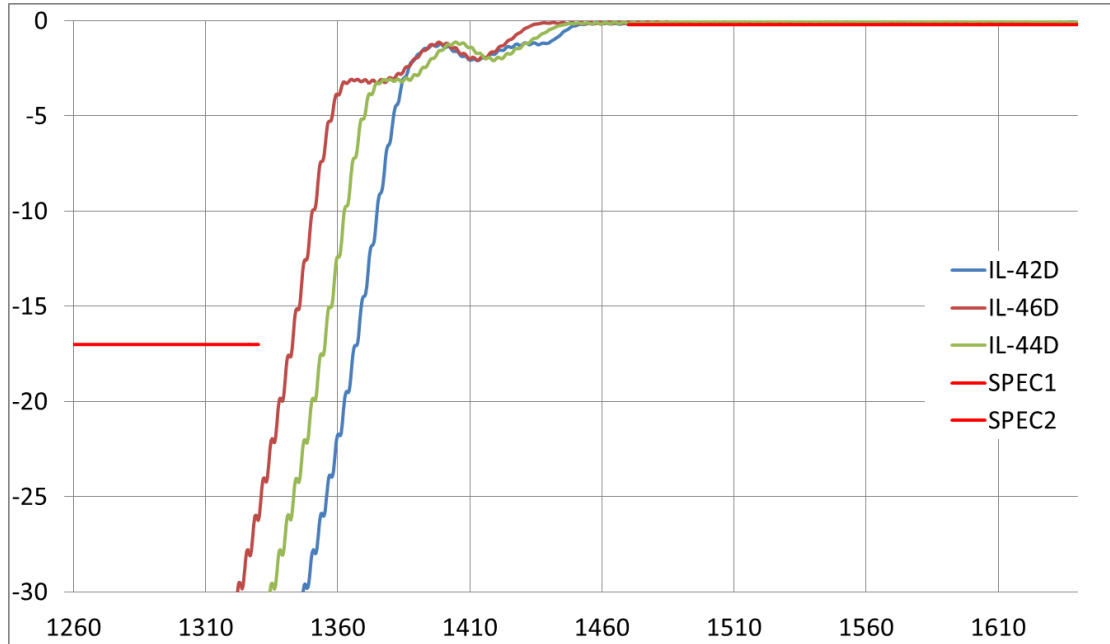
Parameters	Unit	Specifications
Operation Wavelength	nm	1260~1360
AOI in Air	degree	0
Pass Band Wavelength	nm	1260~1280
Stop Band Wavelength	nm	1290~1330
Pass Band IL	dB	<0.08
Pass Isolation@Stop Band	dB	>17
Size (Length*Width*Thickness)	mm	1.4* 1.4* 0.3 or others
Edge/Corner Chip	mm	<= 0.1
Scratch/Dig		40 / 20

Combo_PON_45D_T15R14



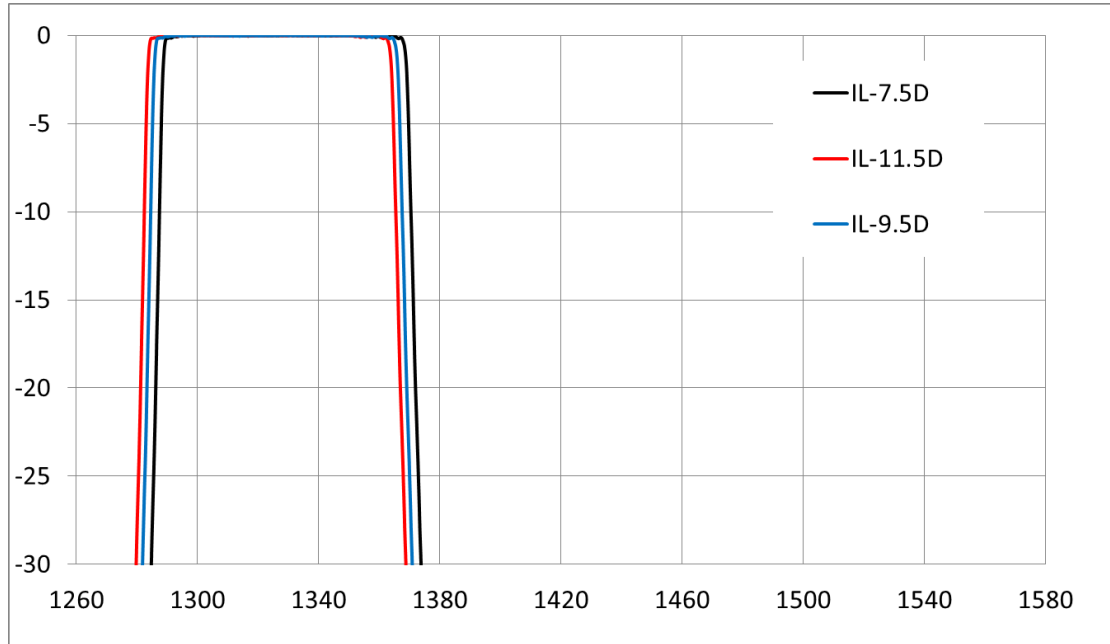
Parameters	Unit	Specifications
Operation Wavelength	nm	1450~1640
AOI in Air	degree	45
Pass Band Wavelength	nm	1548~1600
Stop Band Wavelength	nm	1450~1526
Pass Band IL/T%	dB/%	<0.46 / >90%
Stop Band IL/T%	dB/%	>10 / <10%
Size (Length*Width*Thickness)	mm	1.4* 1.65* 0.21 or others
Edge/Corner Chip	mm	<= 0.1
Scratch/Dig		40 / 20

Combo_PON_44D_T14R13



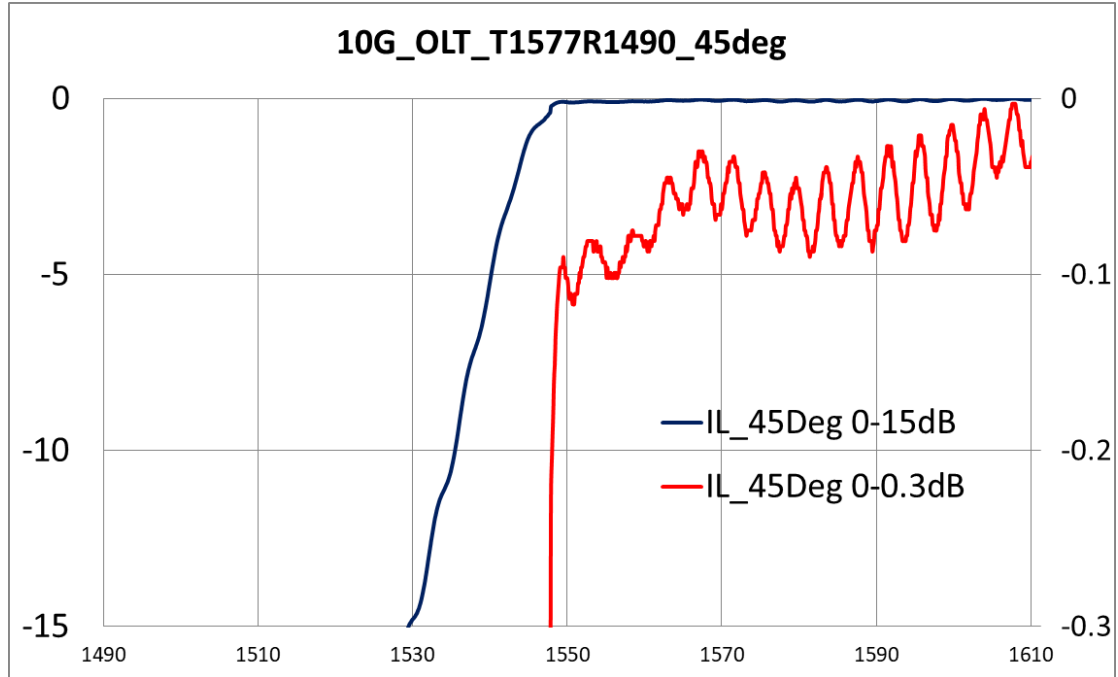
Parameters	Unit	Specifications
Operation Wavelength	nm	1260~1640
AOI in Air	degree	44+/-2
Pass Band Wavelength	nm	1470~1587
Stop Band Wavelength	nm	1260~1330
Pass Band IL	dB	<0.3
Stop Band IL	dB	>17
Size (Length*Width*Thickness)	mm	1.4* 1.65* 0.21 or others
Edge/Corner Chip	mm	<= 0.1
Scratch/Dig		40 / 20

Combo_PON_9.5D_T13R14



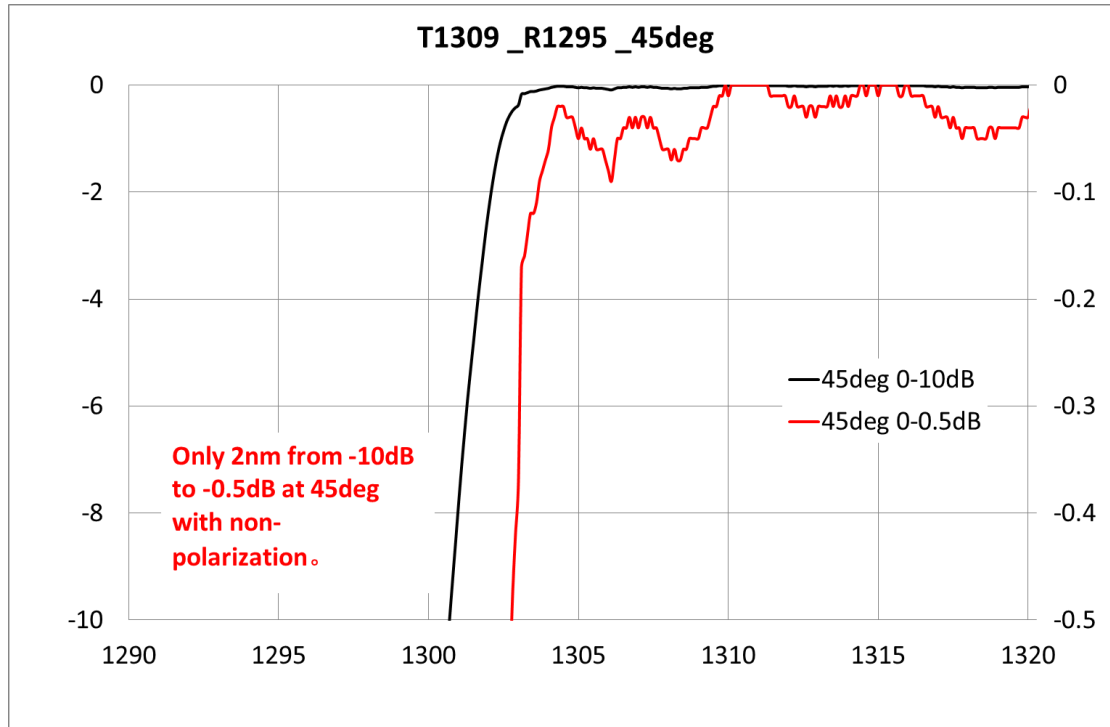
Parameters	Unit	Specifications
Operation Wavelength	nm	1260~1600
AOI in Air	degree	9.5+/-2
Pass Band Wavelength	nm	1290~1330
Stop Band Wavelength	nm	1260~1280&1470~1587
Pass Band IL	dB	<0.3
Stop Band Isolation	dB	>17
Size (Length*Width*Thickness)	mm	1.4* 1.65* 0.21 or others
Edge/Corner Chip	mm	<= 0.1
Scratch/Dig		40 / 20

10G_OLT_T1577R1490_45deg



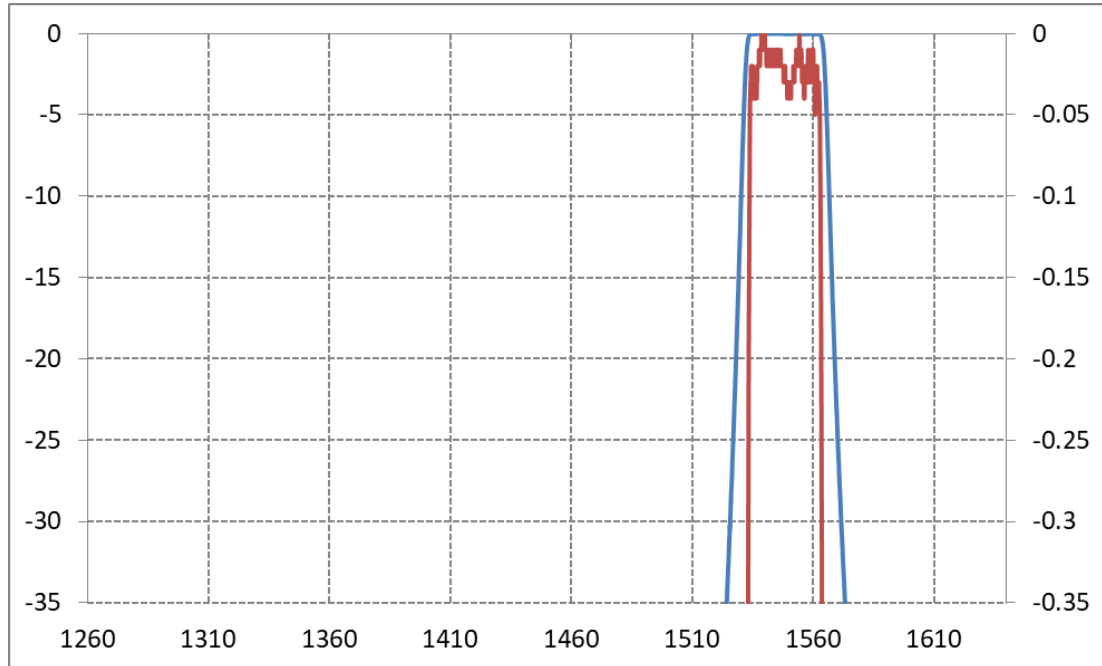
Central Wavelength	Unit	10G_OLT_45D	图例/Example
Wavelength Range	nm	1450~1600	
Pass Band	nm	1450~1526	
Reflection Band	nm	1548~1600	
Max Insertion Loss within Pass Band	dB	<0.45	0.207
Pass Isolation@Reflection Band	dB	>10	18
Steepness from -10dB to -0.5dB with non-pol	nm	N/A	12.1
Reflection AR Coating On Backside at Passband	%	< 0.2	
Size (Length*Width*Thickness)	mm	1.4*1.65*0.21 or TBD	

5G_T1309_R1295_45deg



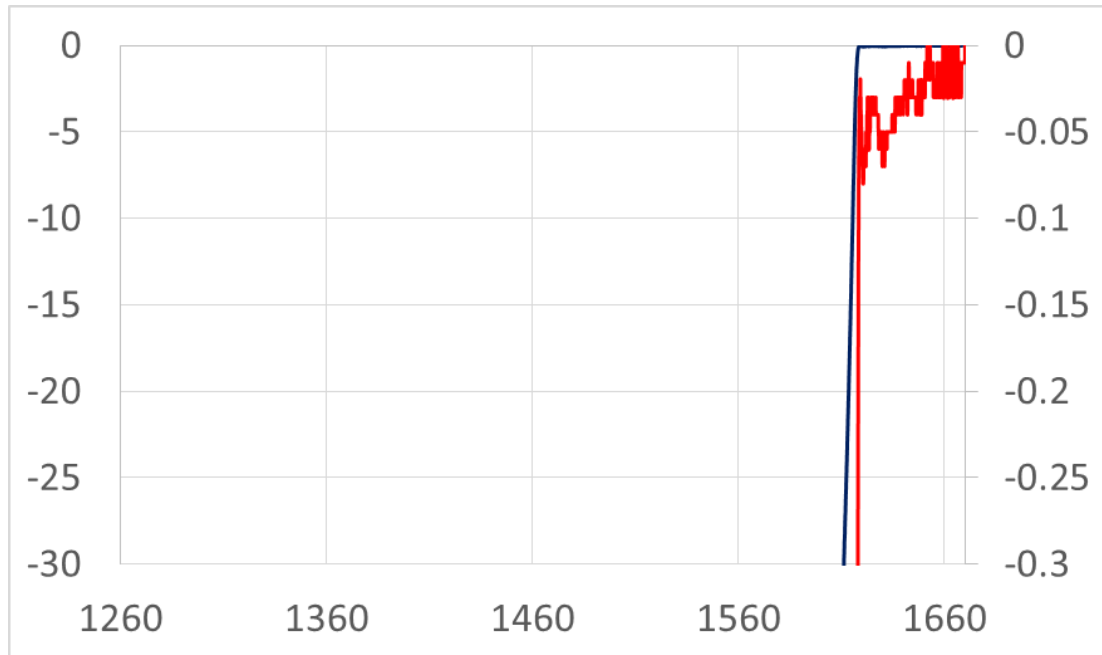
Central Wavelength	Unit	T1309R1295_45D	图例/Example
Wavelength Range	nm	1260 ~ 1360	
Pass Band	nm	1309.11+/-1.5	
Reflection Band	nm	1295.56+/-1.5	
Max Insertion Loss within Pass Band	dB	< 0.45	0.07
Pass band Ripple	dB	<0.3	0.07
Pass Isolation@Reflection Band	dB	>10	33.5
Steepness from -10dB to -0.5dB with non-pol	nm		2
Reflection AR Coating On Backside at Passband	%	< 0.2	
Size (Length*Width*Thickness)	mm	1.5*1.91*0.3 or TBD by Customer	

PWDM



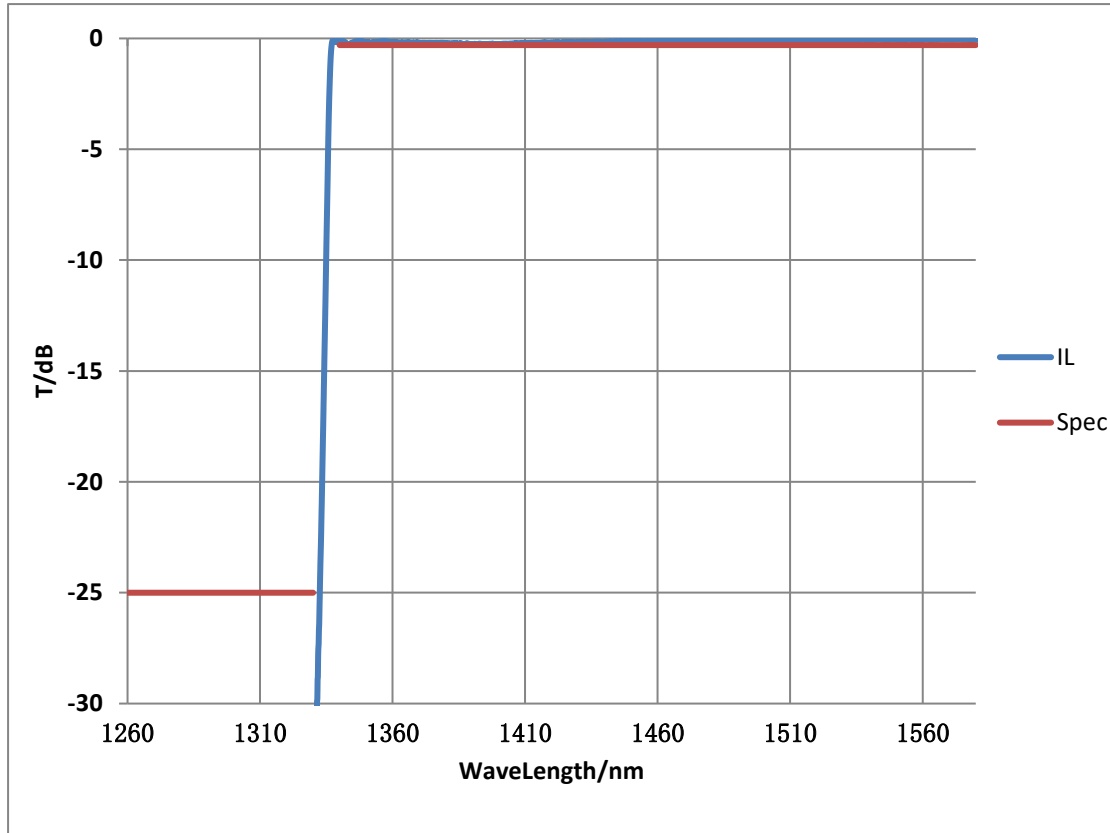
Parameters	Unit	Specifications
Operation Wavelength	nm	1260~1675
AOI in Air	degree	1.8
Pass Band Wavelength	nm	1550~1560
Reflect Band Wavelength	nm	1260~1544&1575~1675
Pass Band Ripple	dB	≤ 0.12
Pass Isolation@Reflection Band	dB	≥ 30
Reflection Isolation@Pass Band	dB	≥ 15
PDL within Pass Band	dB	≤ 0.1
Reflection of Backside AR Coating	%	≤ 0.2
Size (Length*Width*Thickness)	mm	$1.2 \pm 0.1 * 1.2 \pm 0.1 * 1.0 \pm 0.2$
Wedge Angle	degree	0.2~0.6
Edge/Corner Chip	mm	≤ 0.1
Scratch/Dig		60 / 40

OTDR



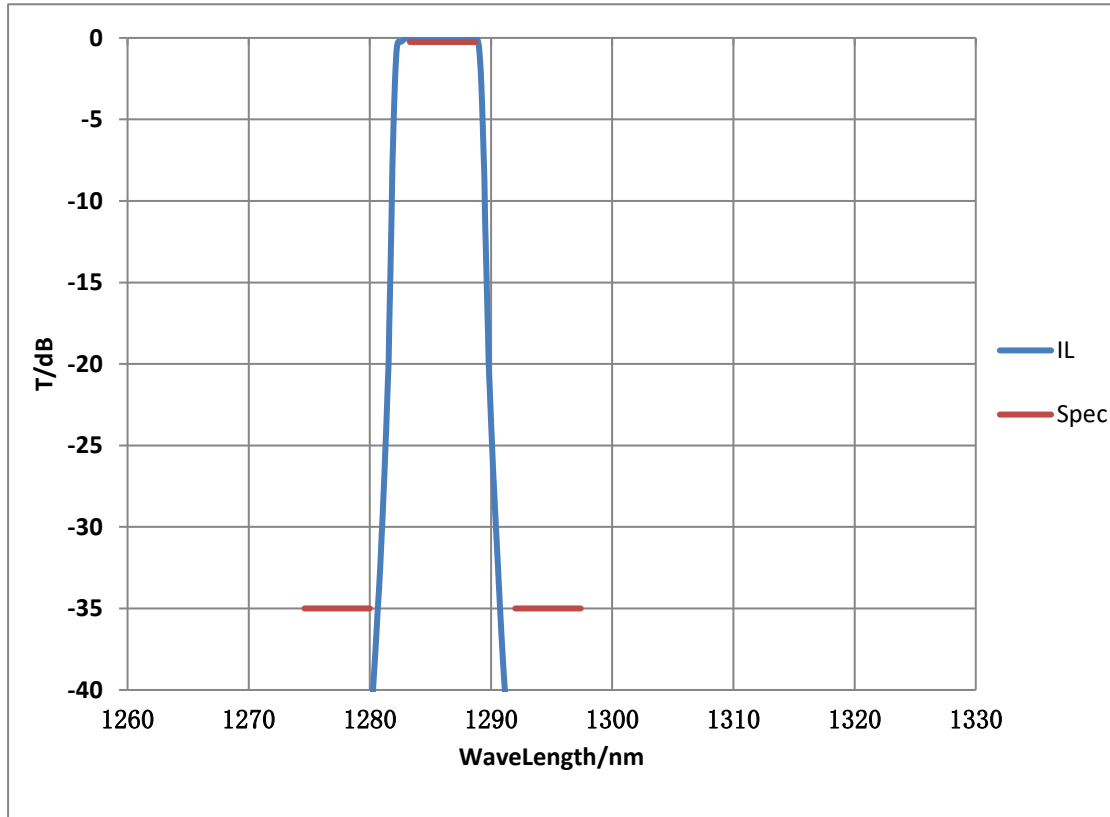
Parameters	Unit	Specifications
Operation Wavelength	nm	1260~1675
AOI in Air	degree	1.8
Pass Band Wavelength	nm	1621~1670
Reflect Band Wavelength	nm	1260~1611
Pass Band Ripple	dB	<= 0.2
Pass Isolation @Reflect Band	dB	>=25
Reflection Isolation @Pass Band	dB	>=15
PDL within Pass Band	dB	<= 0.1
Reflection of Backside AR Coating	%	<= 0.2
Size (Length*Width*Thickness)	mm	1.2±0.1 * 1.2±0.1 * 1.0±0.2
Wedge Angle	degree	0.2~0.6
Edge/Corner Chip	mm	<= 0.1
Scratch/Dig		60 / 40

50G_PON(Z-Block)LPF1335



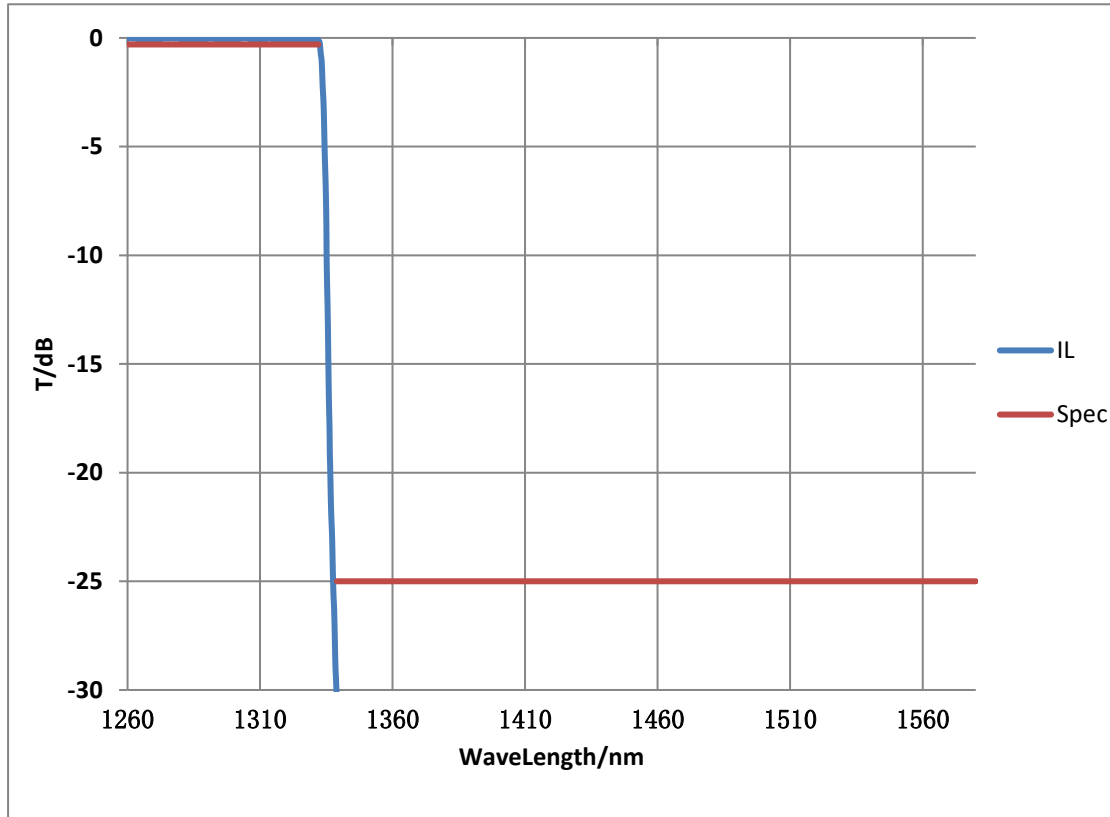
Parameters	Unit	Specifications
Operation Wavelength	nm	1260~1675
AOI in Air	degree	8
Pass Band Wavelength	nm	1340~1580
Reflect Band Wavelength	nm	1260~1330
Pass Band Ripple	dB	≤ 0.3
Pass Isolation @Reflect Band	dB	≥ 25
Reflection Isolation @Pass Band	dB	≥ 12
PDL within Pass Band	dB	≤ 0.1
Reflection of Backside AR Coating	%	≤ 0.2
Size (Length*Width*Thickness)	mm	$0.75 \pm 0.03 * 0.75 \pm 0.03 * 0.7 \pm 0.03$
Edge/Corner Chip	mm	≤ 0.1
Scratch/Dig		40 / 20

50G_PON(Z-Block)BP1286



Parameters	Unit	Specifications
Operation Wavelength	nm	1260~1460
AOI in Air	degree	8
Pass Band Wavelength	nm	1284~1288
Reflect Band Wavelength	nm	1260~1280&1292-1330
Pass Band Ripple	dB	≤ 0.25
Pass Isolation @Reflect Band	dB	≥ 35
Reflection Isolation @Pass Band	dB	≥ 12
PDL within Pass Band	dB	≤ 0.1
Reflection of Backside AR Coating	%	≤ 0.2
Size (Length*Width*Thickness)	mm	0.75±0.03 * 0.75±0.03 * 0.7±0.03
Edge/Corner Chip	mm	≤ 0.1
Scratch/Dig		40 / 20

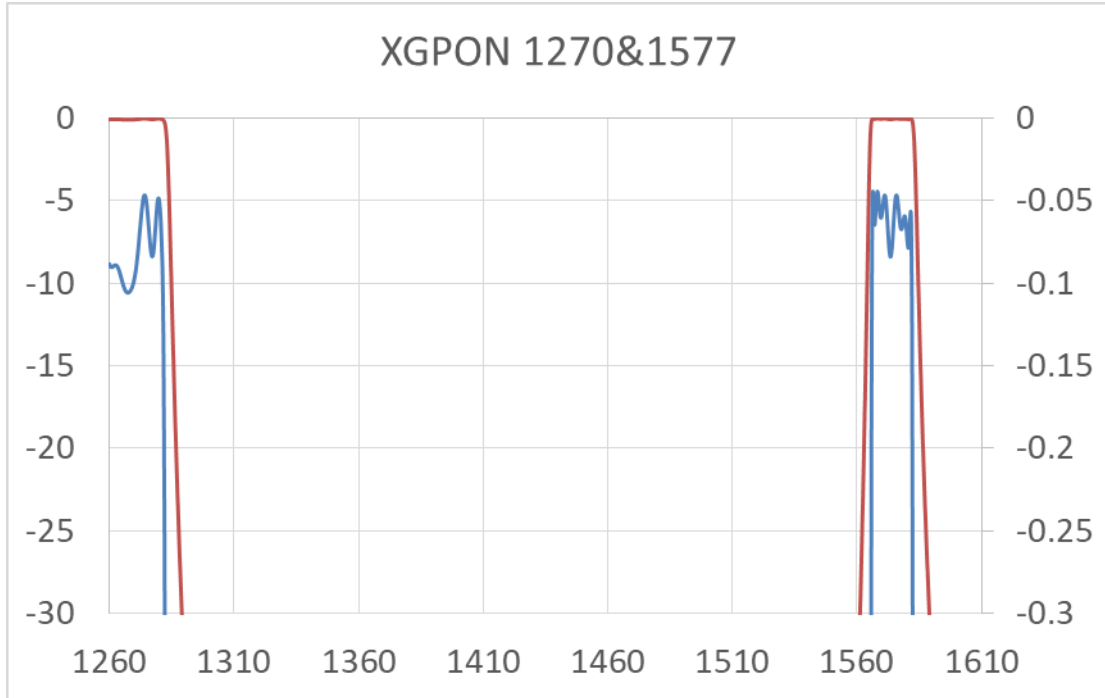
50G_PON(Z-Block)SPF1335



Parameters	Unit	Specifications
Operation Wavelength	nm	1260~1460
AOI in Air	degree	8
Pass Band Wavelength	nm	1260~1330
Reflect Band Wavelength	nm	1340-1580
Pass Band Ripple	dB	≤ 0.25
Pass Isolation @Reflect Band	dB	≥ 25
Reflection Isolation @Pass Band	dB	≥ 12
PDL within Pass Band	dB	≤ 0.1
Reflection of Backside AR Coating	%	≤ 0.2
Size (Length*Width*Thickness)	mm	$0.75 \pm 0.03 * 0.75 \pm 0.03 * 0.7 \pm 0.03$
Edge/Corner Chip	mm	≤ 0.1
Scratch/Dig		40 / 20

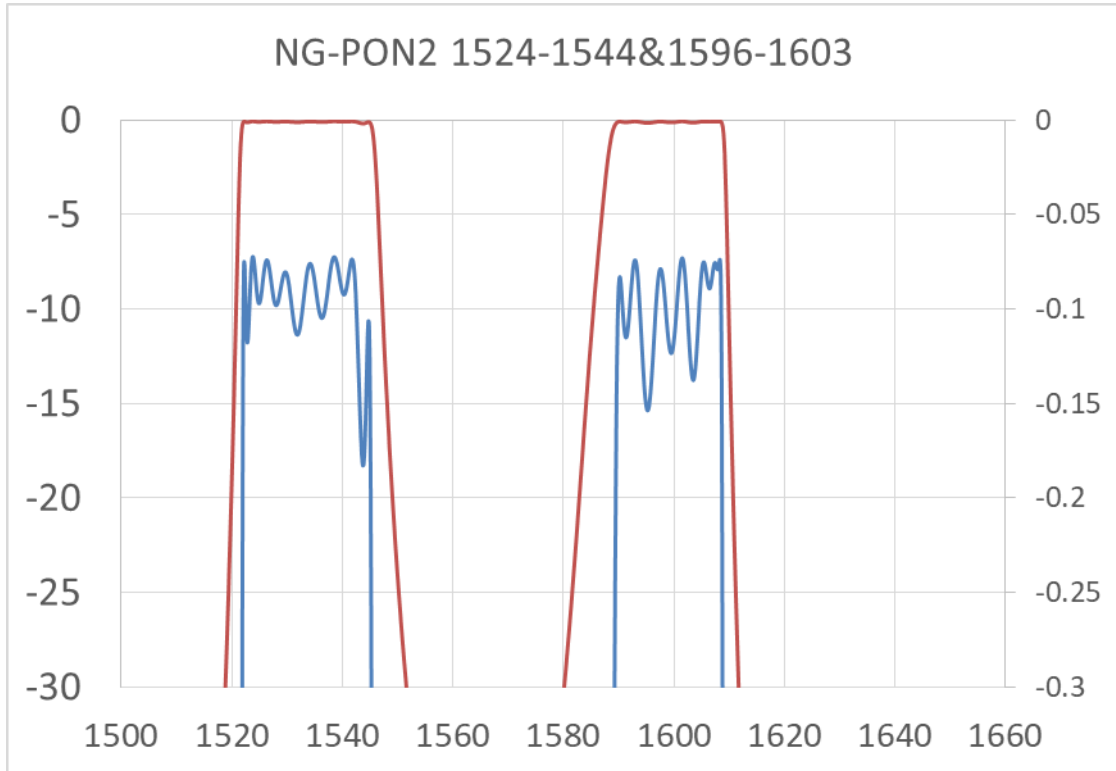
【其他】

XG-PON 1270+1577



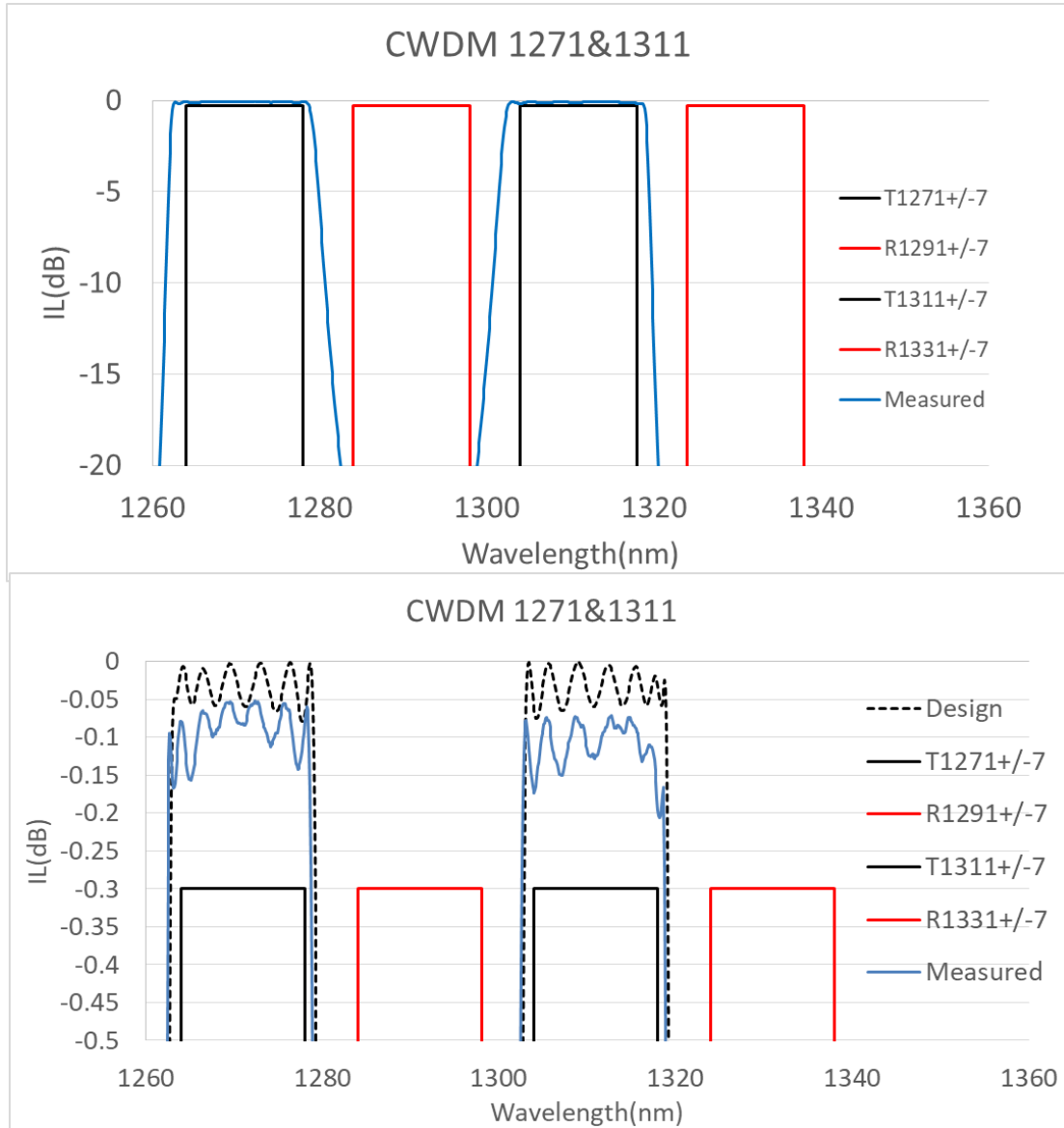
Parameters	Unit	Specifications	图例/Example
Operation Wavelength	nm	1260~1650	
Angle of Incident	degree	1.8	
Pass Band Width	nm	1260-1280,1575-1580	
Stop Band Width	nm	1290-1555,1590-1650	
Transmission Isolation 1290-1555	dB	≥ 30	45.5
Transmission Isolation 1590-1650	dB	≥ 30	43.8
Max IL within PassBand	dB	≤ 0.3	0.11
Ripple within 1260-1280	dB	≤ 0.25	0.063
Ripple within 1575-1580	dB	≤ 0.25	0.034
Reflection Isolation	dB	≥ 15.0 or 13	18.3
Polarization Dependent Loss within PassBand	dB	≤ 0.1	
Reflection of Backside AR Coating	%	≤ 0.2	
Size (Length*Width*Thickness)	mm	(1.4±0.1)*(1.4±0.1)*(1.0±0.2) (1.2±0.1)*(1.2±0.1)*(1.0±0.2)	
Wedge Angle	degree	0.2	
Edge/Corner Chip	mm	≤ 0.1	
Scratch/Dig		60 / 40	

NG-PON 1524-1544&1596-1603



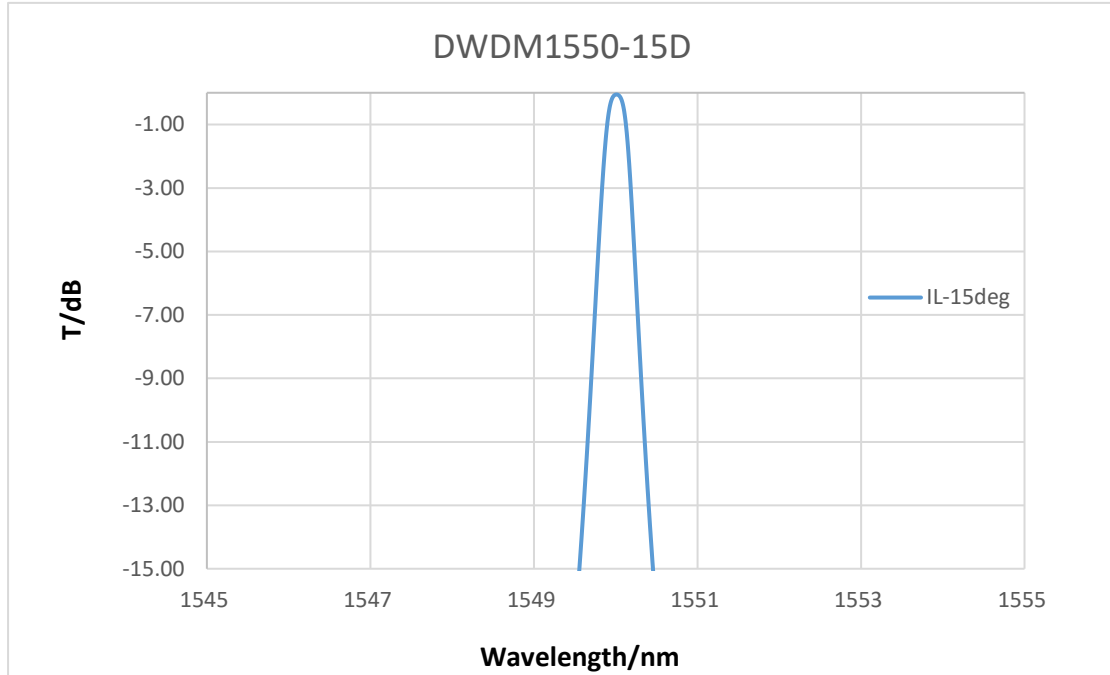
Parameters	Unit	Specifications	图例/Example
Operation Wavelength	nm	1260~1650	
Angle of Incident	degree	1.8	
Pass Band Width	nm	1524-1544,1596-1603	
Stop Band Width	nm	1260-1500,1550-1581,1625-1675	
Isolation at 1260-1500&1625-1675	dB	≥ 40	49.6
Isolation at 1550-1581	dB	≥ 20	30.8
Max IL within Pass Band	dB	≤ 0.3	0.18
Ripple within 1524-1544	dB	≤ 0.25	0.135
Ripple within 1596-1603	dB	≤ 0.25	0.083
Reflection Isolation	dB	≥ 15.0 or 13	16.3
Polarization Dependent Loss	dB	≤ 0.1	
Reflection of Backside AR Coating	%	≤ 0.2	
Size (Length*Width*Thickness)	mm	(1.4±0.1)*(1.4±0.1)*(1.0±0.2)	
Wedge Angle	degree	0.2~0.6	
Edge/Corner Chip	mm	≤ 0.1	
Scratch/Dig		60 / 40	

Dual Band 1271&1311



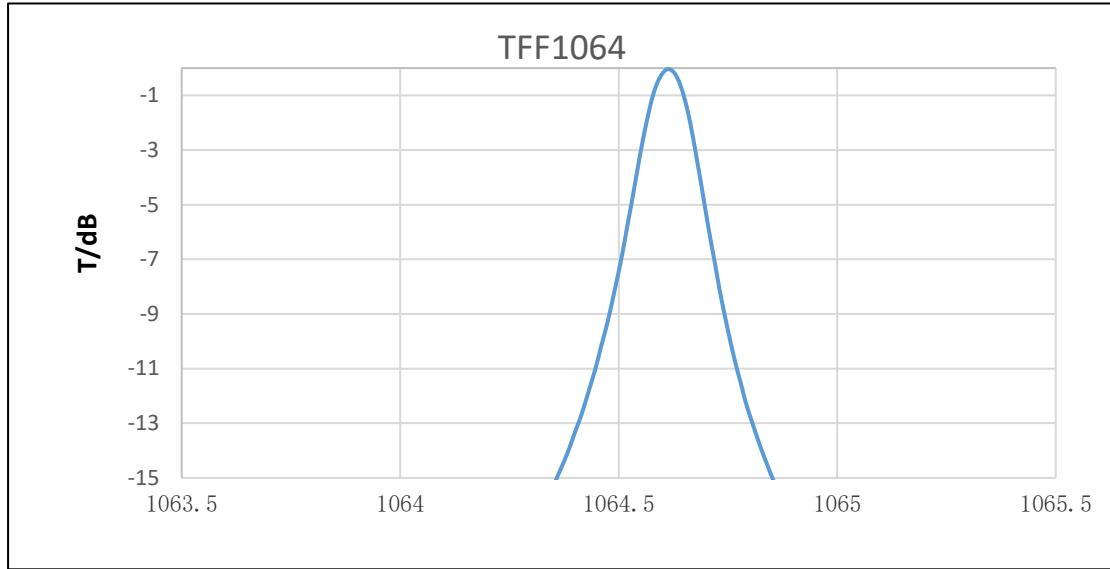
Parameters	Unit	Specifications	图例/Example
Operation Wavelength	nm	1260~1360	
Angle of Incident	degree	1.8 / 8	
Pass Band Width	nm	1271+/-7, 1311+/-7	
Stop Band Width	nm	1291+/-7, 1331+/-7	
Transmission Isolation	dB	≥ 20	23.3
Max IL within PassBand	dB	≤ 0.3	0.197
Ripple within 1271+/-7	dB	≤ 0.3	0.105
Ripple within 1311+/-7	dB	≤ 0.3	0.126
Reflection Isolation	dB	≥ 12 or 15	15.5

DWDM1550-15D



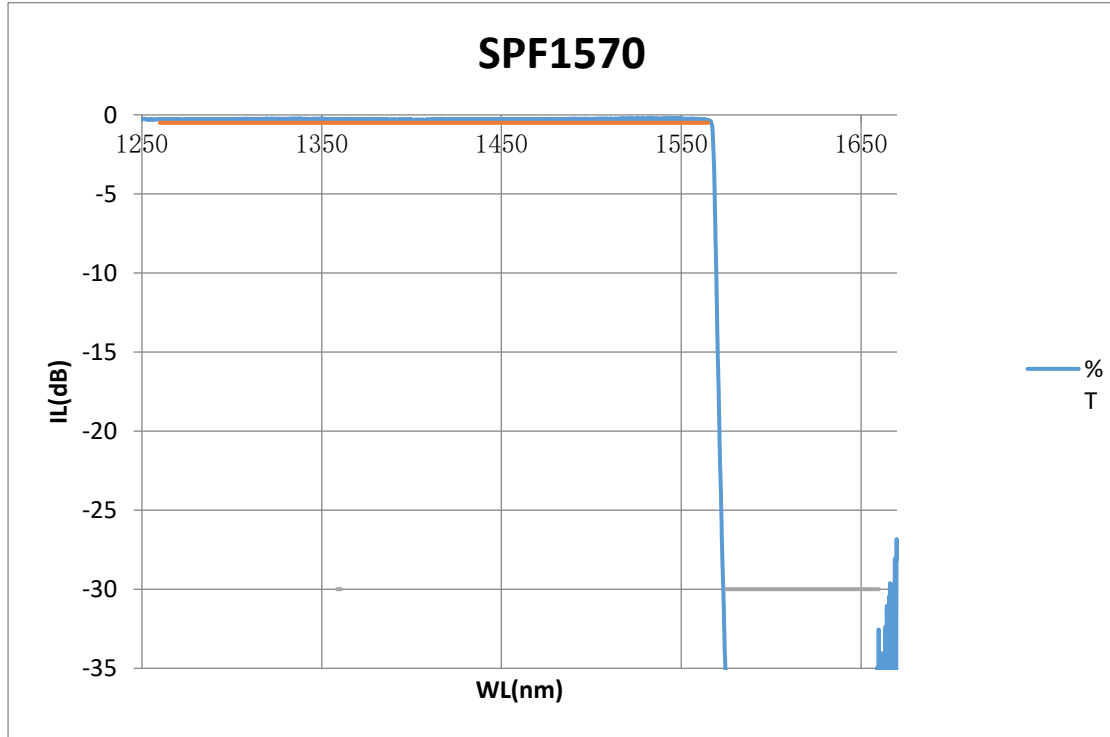
Parameter	Unit	Specifications
Operating Wavelength	nm	1520~1580
CWL	nm	1550
Bandwidth@0.5dB	nm	≥0.13
Bandwidth@3dB	nm	<0.45
Bandwidth@15dB	nm	<1.2
Peak IL	dB	≤ 1.0
Scratch/Chip		60/40
Edge/Corner Chip	mm	≤0.1/0.15
Size(L×W×T)	mm	(3±0.1)*(3±0.1)*(1±0.1)
Incident Angle	degree	15
Tuning Angle	degree	±0.2
Compliance		ROHS

TFF1064



Parameter	Unit	Specifications
Operating Wavelength	nm	994.3~1134.3
CWL	nm	1064.3(+0.1~0.5)@0°
Bandwidth@3dB	nm	<0.1(典型值 0.06)
Bandwidth@15dB	nm	<1.0
Peak IL	dB	£ 0.5
Scratch/Chip		60/40
Edge/Corner Chip	mm	<0.1
Incident Angle	degree	0
Size(L×W×T)	mm	(1.4±0.1)*(1.4±0.1)*(1.2±0.1))
Compliance		ROHS

SPF1570



Parameter	WL/nm	Spec	Result
IL	1260-1565	IL < 0.5dB	PASS
ISO	1575-1660	IOS > 30dB	PASS