

## YSTA542DG-LC

## LC 10G 1550nm EML TOSA

### Features:

- ◆ High-stability 1550nm EML
- ◆ Built-in InGaAsP monitor photodiode
- ◆ Low Threshold
- ◆ High Reliability
- ◆ LC Receptacle Package

### Application:

- Optical Communication System



### Specification:

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Laser operating temperature	Top	-	55			° C
LD Bias Current	Iop	BOL	-	70	90	mA
		EOL			100	
LD Forward Voltage	Vf	If=Iop	-	-	1.5	V
Threshold Current	Ith	CW, Pf=10uw	-	20	40	mA
Center wavelength	$\lambda_c$	CW, Pop	1531	1550	1564	nm
Spectral Width	$\Delta\lambda$	-20dB, CW, Pop	-	-	0.3	nm
Side Mode Suppression Ratio	SMSR	CW, Pop	35	-	-	dB
Modulation DC Bias Voltage	Von	10.709225Gbps, PRBS 2 <sup>31</sup> -1, Pop, ER	-1	-	0	V
Modulation Amplitude Voltage	Vpp	10.709225Gbps, PRBS 2 <sup>31</sup> -1, Pop, ER	-	1.6	2	V
Extinction Ratio	ER	10.709225Gbps, PRBS 2 <sup>31</sup> -1, Pop, V=Von±Vpp/2	9.5	-	-	dB
Operating Output Power	Pop	10.709225Gbps, PRBS 2 <sup>31</sup> -1, ER, V=Von±Vpp/2, Tc=25° C	1	-	4	dBm
Rise/Fall Time	-	20%~80%, 10.709225G filter	-	-	45	Ps
Dispersion Penalty	DP	40Km G.652 (800ps/nm) fiber, 10.709225Gbps, ER, Pop, BER=1E-3	-	-	2	dB
Mask margin	MM	10.709225Gbps, PRBS 2 <sup>31</sup> -1, Pop,NRZ	13	-	-	%
Relative intensity noise	RIN	CW,F<10GHz	-	-	-135	dB/Hz
Monitor PD Current	Imon	CW, Iop, Vr=-5V	0.05	-	1	mA
Monitor PD Dark Current	Id	Vr=-5V	-	-	0.1	uA
Tracking Error	TE	10log(Pf@Tc)/Pf@25° C), CW, Imon=constant@25° C, Von=0,Tc=-5° C,+80° C	-1.2	-	0.6	dB

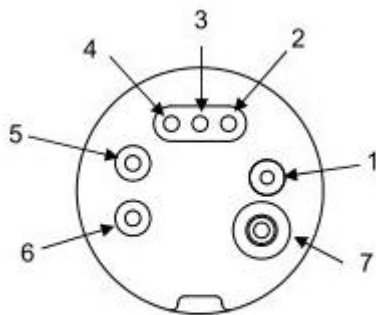
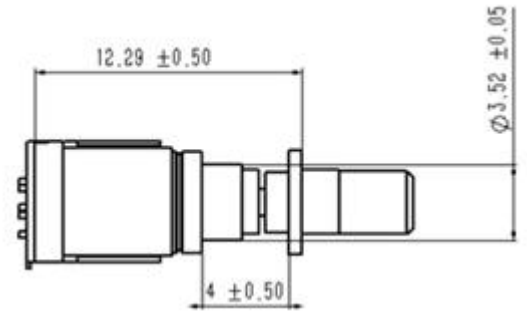
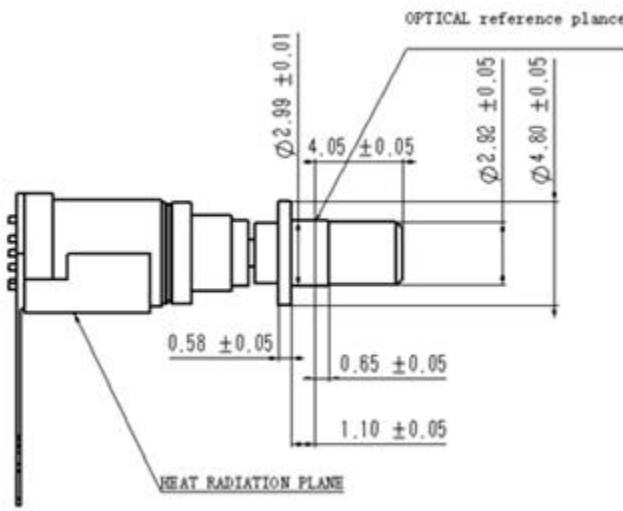
产品名称: YSTA542DG-LC

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Parameter	Symbol	Test Condition	Min	Type	Max	Unit
TEC Current	Itec	Iop, Vpp, Von, Tc=-5° C, Tld=55° C	-0.3	-	-	A
TEC Voltage	Vtec		-1.1	-	-	V
TEC Power	Ptec		-	-	0.35	W
TEC Current	Itec	Iop, Vpp, Von, Tc=80° C, Tld=55° C	-	-	0.3	A
TEC Voltage	Vtec		-	-	0.9	V
TEC Power	Ptec		-	-	0.3	W

**Outline size and Pin Assignment:**



Pin configuration  
(bottom view)

PIN Number	Function
1	EAM DATA(ANODE)
2	PD ANODE
3	TEC ANODE
4	TEC CATHODE
5	LD BIAS(ANODE)
6	THERMISTOR
7	SIGNAL GND