

## LC-TOSA 10G 1310nm DFB With Isolator

## HELC-D10AD20G

**Features**

- ◆ Direct modulated and uncooled operation at 1310nm wavelength
- ◆ High-stability MQW-DFB laser Diode
- ◆ Built-in InGaAsP monitor photodiode
- ◆ Coaxial LC TOSA package (5pin)
- ◆ Built-in optical isolator
- ◆ Up to 10 km

**Applications**

- ◆ Supports performance up to 10.7 Gb/sec bit rate, 20°C to +80°C operating
- ◆ 10 Gigabit Ethernet
- ◆ LR1 SONET/ SDH OC-192/ STM-64

**1. Absolute Maximum Ratings**

(Unless specified else, the specifications below are defined at  $T_C=25\pm 3^\circ\text{C}$  )

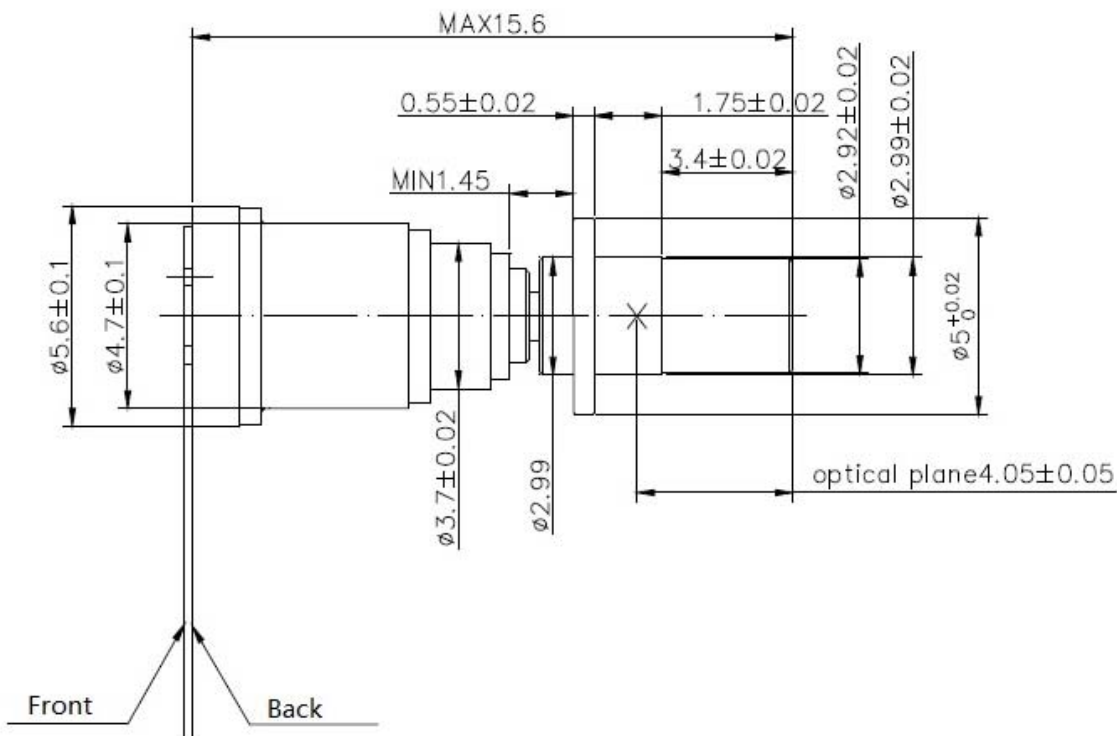
Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	Tstg	-40	85	°C
Operating Case Temperature	Topr	-20	85	°C
Reverse Voltage(LD)	$V_{RL}$	---	2	V
Reverse Voltage(PD)	$V_{RD}$	---	20	V
Photodiode Forward Current(PD)	$I_{FD}$	---	2	mA
Forward Current (LD)	$I_{LD}$	---	120	mA
Lead Soldering (Temperature)/(Time)	---	---	260/10	°C/Sec

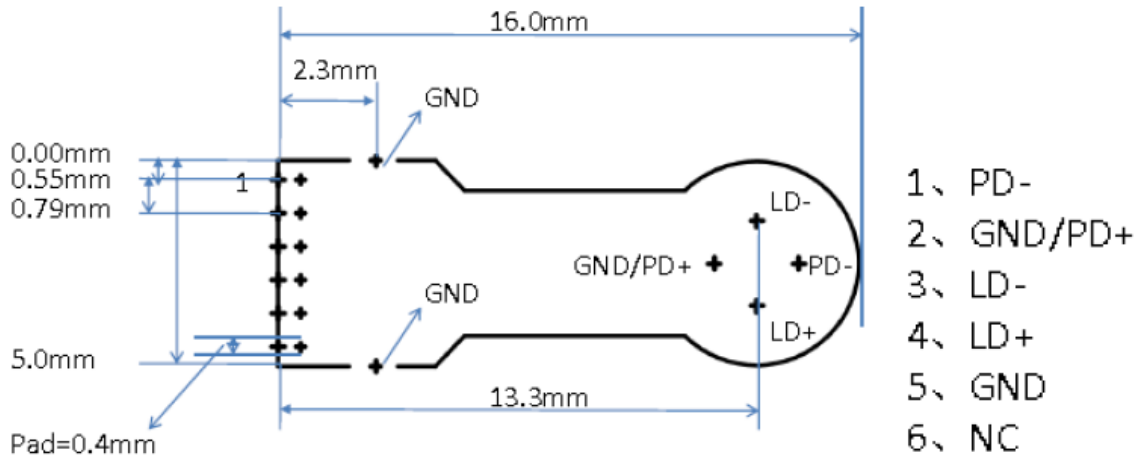
## 2. Electrical and Optical Characteristics

(Unless specified else, the specifications below are defined at TC=25°C )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note	Inspection
Output Optical Power	Pf	0.3	---	0.8	mW	CW, Iop=Ith+20mA,	100%inspection
Threshold Current	Ith	---	7	---	mA	Tc=25±3°C	100%inspection
Peak Wavelength	λp	1290	1310	1330	nm	CW, Iop=Ith+20mA,	---
Side mode suppression ratio	SMSR	30	40	---	dB	CW	---
Operating Voltage	Vop	---	---	1.7	V	CW, Iop=Ith+20mA,	100%inspection
Monitor Current	Im	0.05	---	1.0	mA	VRD=1V	100%inspection
Monitor Dark Current	Id	---	---	0.1	μA	VRD=1V	---
Rise/Fall Time	Tr/ Tf	---	---	50	ps	20%~80%	---
Optical Isolation	ISO	30	---	---	dB	---	---
Tracking Error	TE	-1.5	---	1.5	dB	APC, -20°C/+25°C, +25°C/+85°C	---

## 3. Package Dimension/ Pin Package Drawing: (unit: mm)



**FPC(FRONT)**

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