

Product Specification

Product	2.5Gbps 1310nm DFB/LD
Model	XTD-405C-4206E
File No.	XTD-405C-4206E-#602001
Version	1.0
Issuing Time	Jul. 2020



Specification Revision Record					
Date	Version	Page	Revision Description	Prepare	Approve

XTD-405C-4206E-#602001

2.5Gbps 1310nm DFB/LD

FEATURES

- Data rate up to 2.5Gbps
- 1310nm typical emission wavelength
- Good high temperature characteristics
- TO56 package with a $\Phi 2.0\text{mm}$ ball lens
- Uncooled DFB/LD chips with MQW structure



APPLICATIONS

- Data communications
- Access, Ethernet, Fiber Channel
- Other optical transmission system

Absolute Maximum Ratings

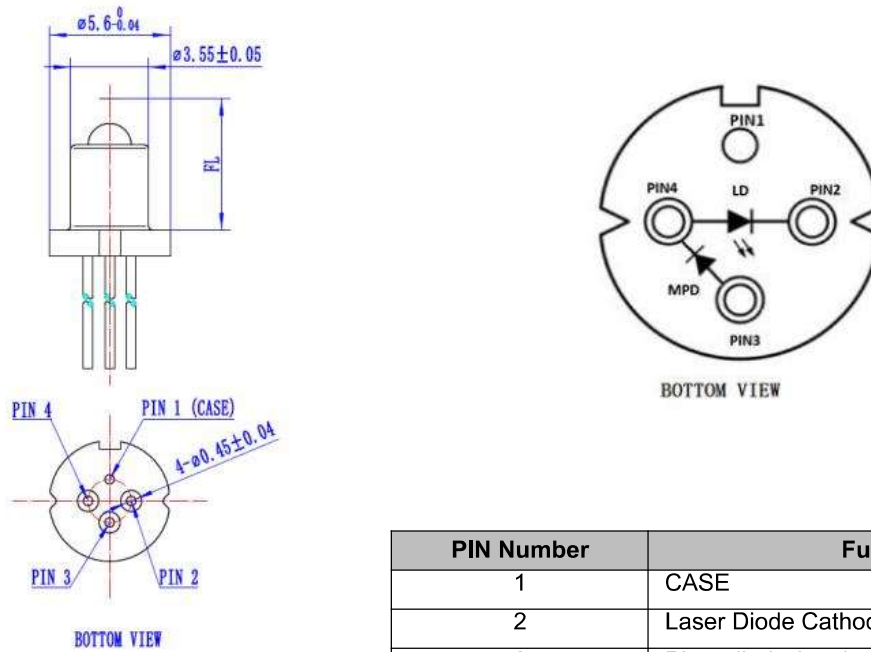
Parameters	Symbol	Min	Max	Unit
Forward Current	I _f	-	150	mA
Optical Output Power	PO	-	40	mW
Reverse Voltage	V _r	-	2	V
Operation Temperature	TO	-20	85	°C
Storage Temperature	TSTG	-40	100	°C

Electrical/Optical Characteristics (T=25°C)

Parameters	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Threshold Current	I _{th}	T _c =25°C	3	8	14	mA
Optical Output Power	PO	I _{th} +20mA	6.8			mW
			6.5		6.8	
Slope Efficiency	SE	I _{th} +20mA	0.34			W/A
			0.325		0.34	
Resistance	R	I _{th} +20mA		8	13	Ω
Center Wavelength	λ	CW, I _{th} +20mA	1300	1310	1320	nm
Side mode Suppression Ratio	SMSR	CW, I _{th} +20mA	35	40		dB
Operating Voltage	V _{op}	I _{th} +20mA		1.2	1.5	V
Monitor Photocurrent	I _m	I _{th} +20mA	150		300	uA
			300		1100	
Distance between Reference Plane to Fiber	FL	CW, PC fiber coupling	6.4	6.6	6.8	mm
Dark current (MPD)	I _d	V _r =5.0V			100	nA
Capacitance (Photo-diode)	C	V _r =5V @ 1MHz			10	PF

XTD-405C-4206E-#602001

Outline Drawings & Pin Connection Type



PIN Number	Function
1	CASE
2	Laser Diode Cathode
3	Photodiode Anode
4	Photodiode Cathode /Laser Diode Anode

Precautions

- Soldering irons, workbenches assembly and other tools and fixtures should be grounded to the discharge static electricity. Workers should wear anti-static clothes and be grounded via a wristband with high resistance ($\sim 10k\Omega$) for safety.
- The soldering conditions for each pin: temperature $< 360^{\circ}\text{C}$, Time < 5 seconds.
- In order to prevent contact failure or short-circuit, please make sure correct connection of peripheral circuit when soldering. Otherwise, breakdown by overheat or burning may occur.
- Please make sure power off when you touch this product connected to the printed circuit boards. Otherwise, electric shock or burning may occur.
- Use the product with the rated voltage described in the specifications. If the voltage exceeds the maximum rating, overheating or burning may occur.