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T13DD-P-LA2A0-I
1310nm DFB Pigtail Laser Diode LC/APC, >2mW, 9/125um SMF

Features

- 1310nm wavelength InGaAsP / InP MQW-DFB laser diode (LD)
- High performance/speed InGaAs monitor PIN photodiode (PD)
- Uncooled operation at -20 to 85°C
- Hermetically sealed
- Low threshold current
- Single-mode fiber pigtailed with LC/APC connector
- With single-stage isolator

Applications

- SONET OC-12/OC-48 / SDH STM-4/STM-16
- Gigabit Ethernet
- Stable light source
- DAS Systems

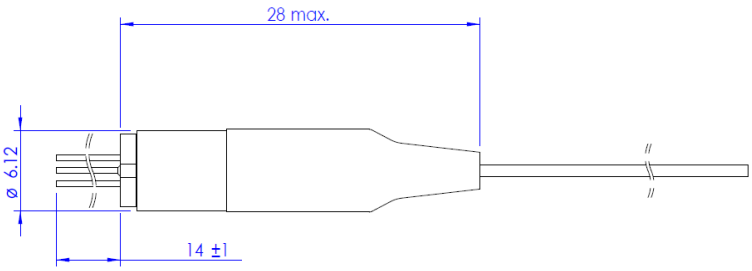
Specifications

Absolute Maximum Ratings				
Parameters	Symbol	Value	Unit	Conditions
Storage temperature	Tstg	-40 to +85	°C	
Operating case temperature	Top	-20 to +85	°C	
Peak optical output power	Pf	8	mW	
Forward current (LD)	I_{FLD}	150	mA	
Reverse voltage (LD)	V_{RLD}	2	V	
Reverse current (PD)	I_{RPD}	2	mA	
Reverse voltage (PD)	V_{RPD}	20	V	
Soldering temperature	Stemp	260	°C	10 seconds

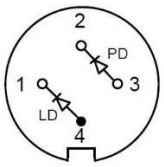
Electro-Optical Characteristics (CW @ T_C = 25°C unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Peak wavelength	λ_p	1290	-	1330	nm	CW, Pf
Side mode suppression ratio	SMSR	35	42	-	dB	CW, Pf
Threshold current	I_{th}	-	6	10	mA	CW
Operating voltage	V_{op}	-	1.15	1.5	V	CW, Pf
Output power	Pf	3.2	-	-	mW	Pf=I_{th}+30mA
Optical isolation	OS	30	35	-	dB	@1310nm, Pf
Rise time	t_r	-	-	120	ps	Ib= I_{th}, 20%~80%
Fall time	t_f	-	-	120	ps	Ib= I_{th}, 20%~80%
Monitor current	Im	0.1	-	1.0	mA	Pf, Vrp=5V
Monitor dark current	Id	-	-	0.1	uA	Vrp=5V
Monitor capacitance	C	-	10	20	pF	Vrp=5V, f=1MHz
Tracking error	ΔPf/ Pf	-	±0.7	±1.5	dB	APC, Tc=-20°C~+85°C

Fiber Pigtail Specifications					
Parameters	Symbol	Min.	Typ.	Max.	Unit
Fiber type	Single Mode Fiber (Flame Retardant Hytrel Coating)				
Cladding diameter	Dcl	122	125	128	um
Mode field diameter	Dmf	-	10	-	um
Coating diameter	Dbc	-	0.9	1	mm
Pigtail length*	L	15	25	35	cm
Bending radius	Rb	30	-	-	mm
Connector	LC/APC				
*From the ferrule-end to the bottom of TO-header.					

Outline Dimensions (unit: mm)



Pin Assignment



Pin Number	Type A
1	LD Cathode
2	PD Cathode
3	PD Anode
4	LD Anode

Additional Notes

- Avoid eye or skin exposure to laser radiation.
- The device is sensitive to electro-static discharge (ESD). The device should be handled with ESD proof tools. To assemble the device on PCB, proper grounding is required to prevent ESD.
- Specifications are subject to change without notice.