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AOD155X

1550 nm DFB Laser Diode for 10 Gb/s

DESCRIPTION

AOD155X Series are 1550 nm DFB laser diodes for 10 Gb/s applications. This laser can be provided either in a Chip on Submount or TO-can configuration.

FEATURES

- InGaAsP MQW Structure
- Low threshold current (Typical 10 mA)
- High side mode suppression ratio (Typical 45 dB)
- High speed pulse response

APPLICATION

10 Gb/s Ethernet/Access/Intermediate Reach

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Rating	Unit
Optical output power	P_o	5	mW
LD forward current	I_{fl}	120	mA
LD reverse voltage	V_{rl}	2	V
Operating temperature	T_o	0 to 70	°C
Storage temperature	T_s	-40 to 100	°C

OPTICAL AND ELECTRICAL CHARACTERISTICS

(CW at To = 25 °C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Threshold current	I_{th}	—	10	20	mA	—
Slope efficiency	η	0.15	0.25	—	W/A	P_o = 5 mW
Operating current	I_{op}	—	30	40	mA	P_o = 5 mW
Operating voltage	V_{op}	—	1.0	1.5	V	P_o = 5 mW
Perpendicular beam divergence angle	$\theta_{\perp}$	-	30	47	deg	CW, Po=5 mW
Parallel beam divergence angle	$\theta_{//}$	-	25	40	deg	CW, Po=5 mW
Lasing Wavelength	λ	1530	1550	1570	nm	P_o = 5 mW
Side mode suppression ratio	SMSR	35	45	—	dB	P_o = 5 mW
Rise time	t_r	—	30	40	psec	20% - 80% (Ppeak=5 mW)
Fall time	t_f	—	30	40	psec	80% - 20% (Ppeak=5 mW)