



AC5615 Series

Low Cost Uncooled 1.25 Gbps CWDM Distributed Feedback Laser (DFB) in TO Package



Description

The AC5615 series laser is a low cost uncooled semiconductor Distributed-Feedback (DFB) laser working at CWDM wavelengths. The device is delivered in a TO-56 package with a monitor photodiode. This high performance and high reliability laser is suitable for applications up to 1.25 Gbps fiber optic links or local networks.

Features

- 1430 nm to 1610 nm emission wavelengths
- High power over wide temperature range
- High side-mode-suppression ratio (typical > 35 dB)
- High Reliability
- Multi-Quantum Well (MQW) active layer

Applications

- Telecommunication
- Data communication
- Storage area networks

Absolute Maximum Rating

Symbol	Parameter	Ratings	Unit
V_{RL}	Reverse Voltage (Laser diode)	2	V
V_{RD}	Reverse Voltage (Photodiode)	20	V
I_{FD}	Forward current (Photodiode)	2	mA
T_C	Case temperature	-20 ~ +85	°C
T_{stg}	Storage temperature	-40 ~ +100	°C


Electrical/Optical Characteristics ($T_c=25^\circ\text{C}$, Unless otherwise specified.)

Symbol	Parameter		Test Conditions	Min.	Typ.	Max.	Unit
I_{th}	Threshold current		CW		8	15	mA
			CW, 85°C			45	
P_o	Optical Output Power	-04	CW, $I_f = I_{th} + 20\text{ mA}$	4			mW
		-05	CW, $I_f = I_{th} + 20\text{ mA}$	5			
V_{op}	Operating voltage		CW, $I_f = I_{th} + 20\text{ mA}$		1.2	1.5	V
SMSR	Side-mode-suppression ratio		CW, $I_f = I_{th} + 20\text{ mA}$	35			dB
$\theta_{//}$	Beam divergence angle (parallel)		CW, $I_{FL} = I_{th} + 20\text{ mA}$		24 (8)		Deg.
θ_{\perp}	Beam divergence angle (perpendicular)		CW, $I_{FL} = I_{th} + 20\text{ mA}$		48 (16)		Deg.
T_r, T_f	Rise and fall time		$I_f = I_{th} + 20\text{ mA}$, 20~80%			200	ps
I_m	Monitor current (Photodiode)		CW, $I_f = I_{th} + 20\text{ mA}$, $V_{RD} = 1\text{ V}$	0.1	0.5		mA
I_D	Dark current (Photodiode)		$V_{RD} = 10\text{ V}$		0.01	0.1	μA
F	Focus Length		Aspherical lens cap "A"	7.2	7.5	7.8	mm

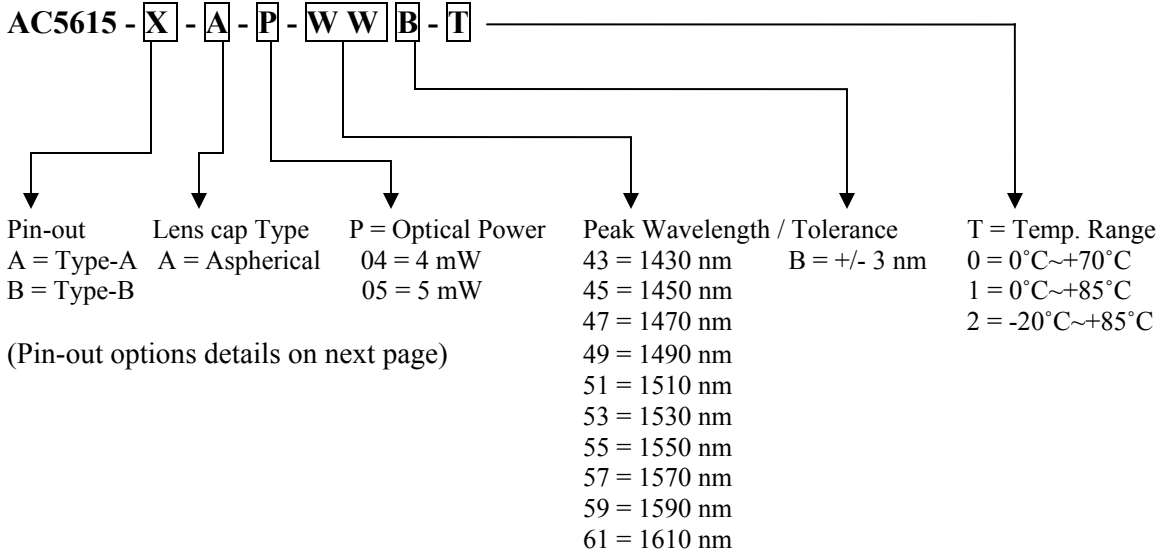
Note 1: () applied to the lens-cap types (-A, and -S)

Wavelength Options: (Test conditions: CW, $I_f = I_{th} + 20\text{ mA}$, $T_c = +25^\circ\text{C}$)

Option	Center Wavelength	Tolerance	Units
-43B	1430	+/- 3	nm
-45B	1450	+/- 3	nm
-47B	1470	+/- 3	nm
-49B	1490	+/- 3	nm
-51B	1510	+/- 3	nm
-53B	1530	+/- 3	nm
-55B	1550	+/- 3	nm
-57B	1570	+/- 3	nm
-59B	1590	+/- 3	nm
-61B	1610	+/- 3	nm



Ordering Information:



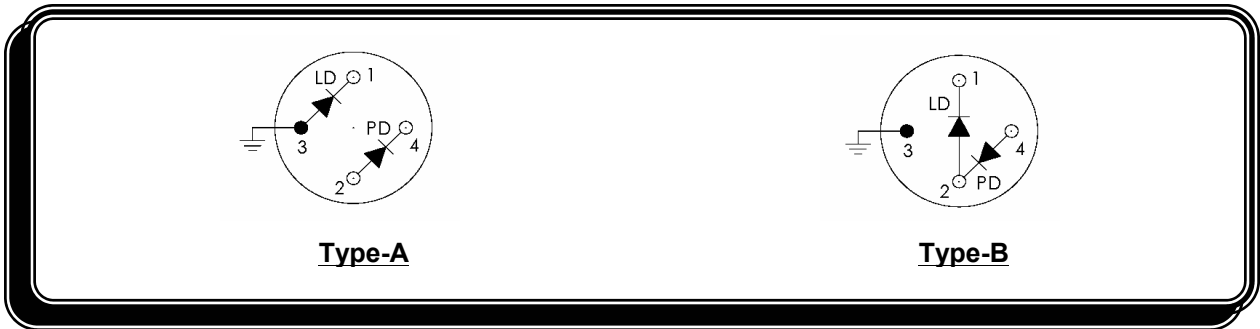
Example: **AC5615-B-A-04-49B-0** is an Archcom 1.25 Gbps CWDM DFB laser, with Type-B pin-out, Aspherical lens cap, output power of 4 mW, center wavelength of 1490 nm +/-3 nm, and a operating temperature range of 0°C~+70°C.

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Pin-out Options (Bottom View)



Package dimensions (in mm):

