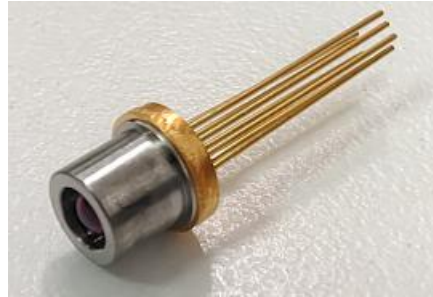




## 1653nm DFB LD TO-CAN(TO60)

### Features:

- DFB Laser
- High wavelength accuracy
- TO60 package with TEC
- Low threshold current



### Applications:

- Gas Sensor

### Specifications:

#### Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Reverse Voltage	$V_{r(LD)}$	—	2.5	V
Optical Output Power	$P_{max}$		30	mW
Forward Current	$I_{f(LD)}$	—	100	mA
Case Temperature	$T_{case}$	-30	+60	°C
Storage Temperature	$T_{stg}$	-40	+85	°C
Lead Solder Temperature	—	—	260	°C
Lead Solder Time	—	—	10	s

#### Electro-Optical Characteristics (25°C, CW)

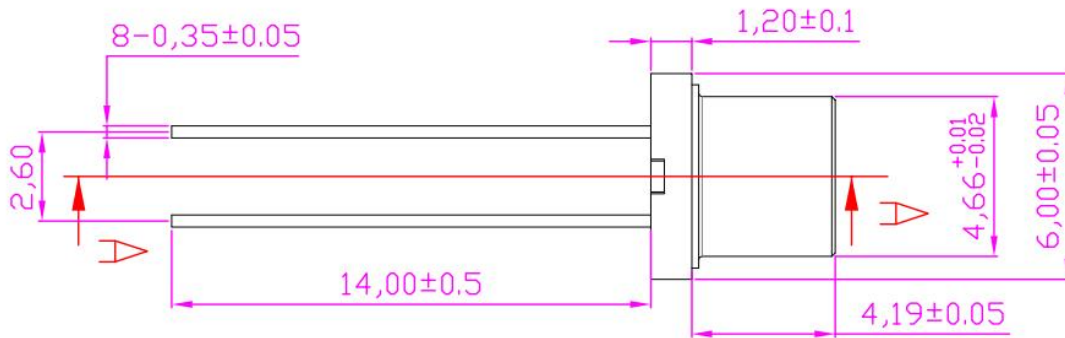
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Threshold Current		$I_{th}$	-	13	16	mA
Slope Efficiency	$I_f=25$ to 65mA	SE	0.13	0.20	-	W/A
Optical Output Power	$I_f=35$ mA	$P_o$	3.5	4.5	-	mW
Laser Forward Voltage	$I_f=35$ mA	$V_f$	-	1.1	1.5	V
Resistance		$R_s$	-	10	15	$\Omega$
Center Wavelengths	$I_f=35$ mA, 25°C	$\lambda_c$	1652.2	1653.2	1654.2	nm



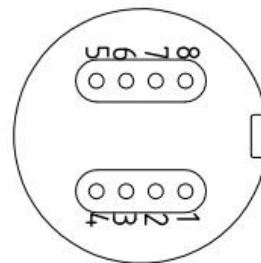
Side Mode Suppression ratio	$I_f=35\text{mA}$	SMSR	35	45	-	dB
Temperature Tuning Coefficient	$I_f=35\text{mA}$	$T_\lambda$		0.1		nm/ °C
Current Tuning Coefficient	25°C	$I_\lambda$		0.02		nm/m A
TEC Current		$I_{\text{TEC}}$			1.0	A
TEC Voltage		$V_{\text{TEC}}$			1.2	V
Thermistor resistance	Rth	25° C	9.5	10	10.5	K Ω
B constant of Rth	B		3800	3930	4000	K

## Mechanical Dimension and Pin Assignment:

### TYPE A



Pin No.	Standard
1	TEC-
2	Thermistor-
3	LD+
4	NA
5	NA
6	LD-
7	Thermistor+
8	TEC+



## BOTTOM VIEW



## **Statement:**

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