

# 1529nm DFB TO-CAN datasheet

P/N : WD53-00A

## Description

The component is assembled from a 1529 nm direct-modulated laser chip, a TEC, a thermistor, a 8pin TO 60 base etc.,which can be used for Ethyne sensing.

## Features

RoHS compliant  
High reliability

## Applications

C<sub>2</sub>H<sub>2</sub> Monitoring



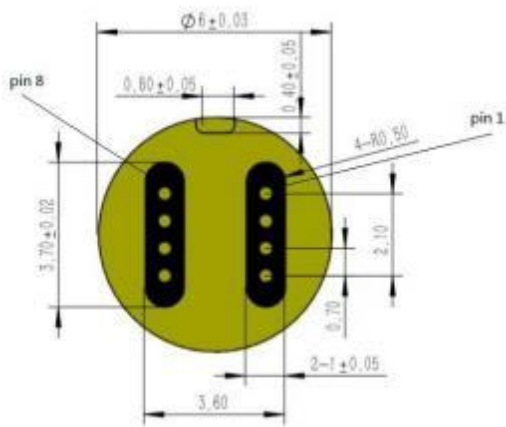
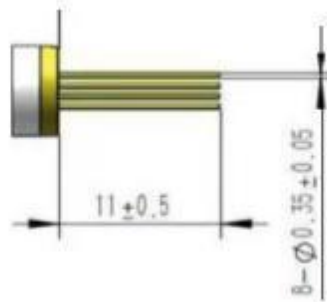
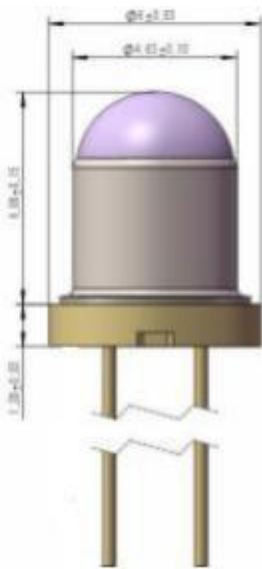
## Electrical/Optical Characteristics (T<sub>c</sub>=25°C unless stated otherwise)

Parameter	Symbol	Value			Units	Note
		Min	Typ.	Max		
Threshold Current	I <sub>th</sub>	-	-	18	mA	CW, TLD = 35°C
Forward Voltage	V <sub>f</sub>	-	1.2	1.6	V	CW, TLD = 35°C, I <sub>op</sub> = 50mA
Output Power	P <sub>op</sub>	4	-	-	mW	CW, TLD = 35°C, I <sub>op</sub> = 50mA
Side-mode Suppression Ratio	SMSR	35	-	-	dB	CW, TLD = 35°C, I <sub>op</sub> = 50mA
Central Wavelength	λ <sub>c</sub>	1528	1531	1534	nm	TLD = 35°C, I <sub>op</sub> = 50mA
Wavelength/Temperature Coefficient	Δλ/ΔT	-	0.1	0.12	nm/°C	CW, TLD = 35°C, I <sub>op</sub> = 50mA
Wavelength/Current Coefficient	Δλ/ΔI	-	0.02	-	nm/mA	CW, TLD = 35°C, I <sub>op</sub> = 50mA
Series Resistance	R <sub>s</sub>	-	-	15	Ω	CW, TLD = 35°C, I <sub>op</sub> = 50mA
Thermistor resistance	R <sub>th</sub>	9.9	10	10.1	kΩ	
B constant of R <sub>th</sub>	B	3890	3930	3969	K	
TEC current	I <sub>tec</sub>	-	-	1	A	CW, T <sub>c</sub> = -5~75°C, TLD = 35°C
TEC voltage	V <sub>tec</sub>	-	-	1.5	V	CW, T <sub>c</sub> = -5~75°C, TLD = 35°C
TEC power	P <sub>tec</sub>	-	-	1.5	W	CW, T <sub>c</sub> = -5~75°C, TLD = 35°C

## ABSOLUTE MAXIMUM RATING

Parameter	Symbol	Units	Min	Max
Storage Temperature	Ts	°C	-40	+85
Operating Case Temperature	Tc	°C	-5	+75
Forward current	If	mA	-	120
Reverse voltage	Vr	V	-	2
Flex Pad Soldering Temperature	-	°C	-	260
Flex Pad Soldering Duration	-	S	-	10

## Mechanical Dimensions & Pin Description



Pin #	Description
1	TEC+
2	LD+
3	Thermister
4	NC
5	NC
6	Thermister
7	LD-
8	TEC-