

1542nm DFB Laser Butterfly 14 Pin Package

1 Features:

- High Quality 14 PIN butterfly package
- Built-in thermoelectric cooler and thermistor
- G.652.D fiber coupling output,FC/APC optical connector

2. Application:

- Fiber optic sensing Sensors

3. Limit parameters (heat sink temperature $T_{Submount} = 25^{\circ}\text{C}$, temperature $T_{Ambient} = 25 \pm 5^{\circ}\text{C}$)

Specs	symbol	Unit	Min	Max
LD reverse voltage	V_{RLD}	V	-	2
LD forward current	I_{FLD}	mA	-	150
MPD reverse voltage	V_{RMPD}	V	-	10
MPD forward current	I_{FMPD}	mA	-	2
TEC operating current	I_{TEC}	A	-0.5	2
TEC Operating Voltage	V_{TEC}	V	-1	3.4
CASE Temperature	T_{Case}	$^{\circ}\text{C}$	-20	+70
Storage Temperature	$T_{Storage}$	$^{\circ}\text{C}$	-40	85
Storage humidity	RH	%	5	95
Pin soldering temperature	$T_{Soldering}$	$^{\circ}\text{C}$	-	260
Pin soldering time	$t_{Soldering}$	s	-	10
Fiber bending radius	R_{Fiber}	mm	30	-
Optical fiber bears tensile	F_{Fiber}	N	-	5
Electrostatic threshold HBM	ESD_{HBM}	V	-	250

4. Optoelectronic parameters (heat sink temperature $T_{Submount} = 25^{\circ}\text{C}$, ambient temperature $T_{Ambient} = 25 \pm 5^{\circ}\text{C}$)

Specs	Symbol	Units	Test Conditions	Min	Typical	Max
heat sink temperature	$T_{Submount}$	$^{\circ}\text{C}$	Thermistor monitoring	20	25	40
LD Forward Voltage	V_{FLD}	V	CW, $I_{FLD} = 100\text{mA}$	-	1.5	2
threshold current	I_{th}	mA	CW	-	10	25
Output Power	P_{Out}	mW	CW, $I_{FLD} = 100\text{mA}$	15	-	-
slope efficiency	SE	mW/mA	CW, $I_{FLD} = I_{th} \sim 120\text{mA}$	0.19	-	-
peak wavelength	λ_P	nm	CW, $I_{FLD} = 100\text{mA}$	-	1542	-
side mode suppression ratio	SMSR	dB	CW, $I_{FLD} = 100\text{mA}$	35	-	-
Peak wavelength temperature Drift coefficient	$\frac{\Delta\lambda_P}{\Delta T_{Submount}}$	nm/ $^{\circ}\text{C}$	CW, $I_{FLD} = 100\text{mA}$ $T_{Submount} = 15 \sim 40^{\circ}\text{C}$	-	0.1	-

Specs	Symbol	Units	Test Conditions	Min	Typical	Max
Peak wavelength current Drift coefficient	$\Delta\lambda_P/\Delta I_{FLD}$	nm/mA	CW, $I_{FLD}=I_{th}\sim 120mA$	-	0.01	-
Spectral linewidth	$\Delta\nu$	MHz	CW, $I_{FLD}=100mA$	-	3	10
Backlight current	I_{RMPD}	mA	CW, $I_{FLD}=100mA$ $V_{RMPD}=5V$	0.05	-	2
MPD dark current	I_{dMPD}	nA	$V_{RMPD}=5V$	-	-	100
NTC Thermistor resistance	R_T	k Ω	@25°C	9.5	10	10.5
NTC thermistor B	B	K	@25°C/50°C	3800	3930	4050

5. dimensions and pin definitions

