



LDI H-DFB-1650-10P

1650nm 10mW DFB LASER DIODE MODULES

These laser diode modules are high stability DFB laser-diode modules with single-mode fiber pigtailed. These modules are optimal 1650nm 10mW light sources for high-speed optical communication systems and measuring instruments.

Absolute maximum ratings

LD forward current, I_{f1}	120mA
LD reverse voltage, V_{r1}	2V
PD reverse voltage, V_{rd}	30V
Operating case temperature, T_c :	
LDI H-DFB-1650-10P-W(H)	-20 ÷ +50°C
LDI H-DFB-1650-10P-T	-20 ÷ +40°C
Storage temperature, T_{stg}	-30 ÷ +60°C

Electrical / optical characteristics (SM, T=25°C)

Parameter		Min.	Typ.	Max.	Unit	Test conditions
Wavelength	λ	1640	1650	1660	nm	CW, P=10mW
Threshold current	I_{th}	4	10	15	mA	CW
Operating current	I_{op}		80	100	mA	CW, P=10mW
Operating voltage	V_{op}		1.2	1.8	V	CW, P=10mW
Slope efficiency	η	0.1	0.12	0.15	mW/mA	CW, P=10mW
Spectral width	$\Delta\lambda$		0.18	0.25	nm	CW, P=10mW, -20dB
Rise and fall times*	t_r, t_f		0.2	0.3	nc	P=10mW, 10-90%
Monitoring output current (PD)	I_m	0.5	1.8	3.2	mA	CW, P=10mW, $V_{rd}=5V$
Capacitance (PD)	C_t		10	20	pF	$V_{rd}=5V, f=1MHz$
Tracking error*	E_r^{**}		0.6	0.8	dB	CW, P=10mW, $I_m=const, T_c=-20\div+50^\circ C$

* LDI FP-1650-10P-W(H)

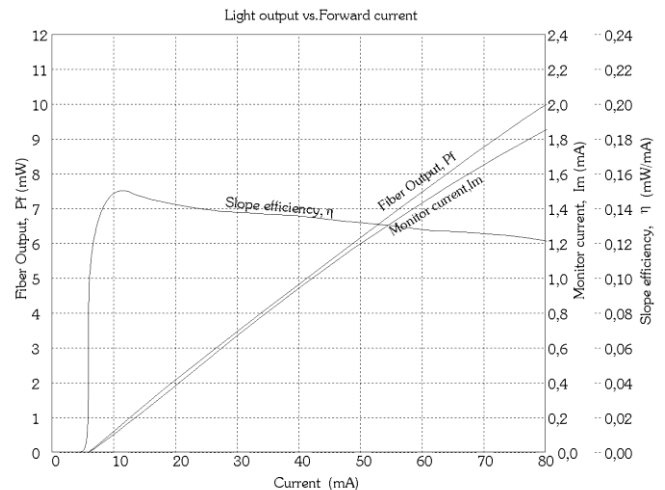
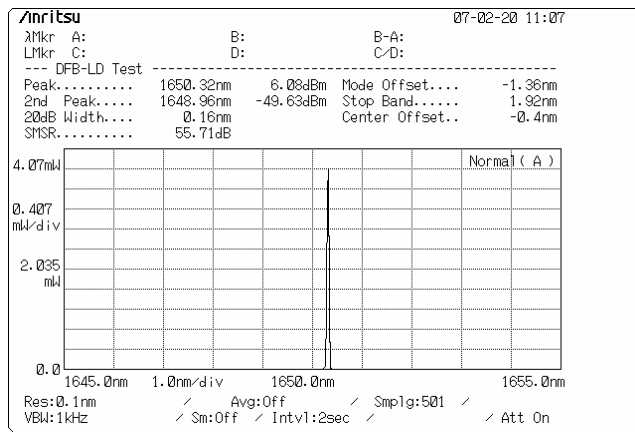
** $E_r = \text{MAX} |10\log(P_f / P_{f, 25^\circ C})|$

Ordering information

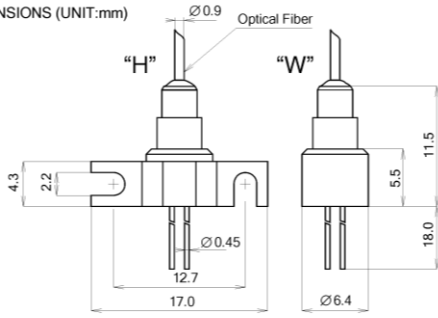
LDI H-DFB-1650-10P-X-SM-X

Case type: **W, H, T**

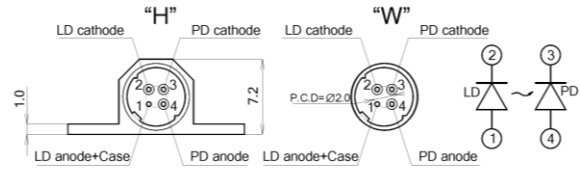
Connector type: **FC/UPC, FC/APC, N** – without connector



PACKAGE DIMENSIONS (UNIT:mm)



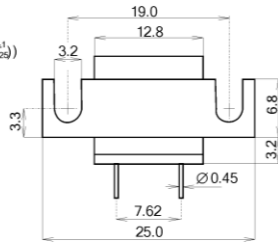
PIN Assignment (Bottom View)



PACKAGE DIMENSIONS (UNIT:mm)

Thermistor
technical data
 $R_T = R_{25} \text{EXP}(b (T^{-1} - T_{25}^{-1}))$
 $R_{25} = 10\text{k}\Omega$
 $b = 3450$
 $T = 1+273$
 $T_{25} = 298$
 Power rating 51mW

Cooler
technical data
 $I_{\text{max}} = 600\text{mA}$
 $Q_{\text{max}} = 1100\text{mW}$
 $V_{\text{max}} = 3.5\text{V}$



PIN Assignment (Bottom View)

