



OPTOELECTRONICS
FU-44SLD-80

ABSOLUTE MAXIMUM RATINGS (T_{LD} = 25°C)

Symbol	Items		Conditions	Ratings	Unit
V _{RL}	Reverse voltage	Laser diode	—	2	V
I _F	Forward current		Pulse (note 1)	1.1	A
T _C	Operating case temperature		—	−15 ~ 65	°C
T _{stg}	Storage temperature		—	−40 ~ 70	°C

Note 1: Pulse condition = Pulse width ≤ 1μs. Duty ratio ≤ 1%

CHARACTERISTICS (T_{LD} = 25°C unless otherwise noted)

Symbol	Items	Test Conditions	Min.	Typ.	Max.	Unit
I _{th}	Threshold current	CW	—	20	50	mA
I _{op}	Operating current	Pulse (Note 1)	—	—	800	mA
V _{op}	Operating voltage	I _{op} = 800 mA Pulse (Note 1)	—	—	5	V
P _F	Optical output power from fiber end	Pulse (Note 1)	80	—	—	mW
λ _c	Central wavelength	I _{op} = 800 mA Pulse (Note 1)	1290	1310	1330	nm
Δλ	Spectral width	I _{op} = 800 mA Pulse (Note 1)	—	—	25	nm
tr, tf	Rise and fall time	I _B = I _{th} , 10 ~ 90% (Note 2)	—	1	—	ns
Er	Tracking error (Note 3)	T _c = −15 ~ 65°C, APC, ATC	—	0.3	—	dB

Note 1: Pulse condition = Pulse width ≤ 1μs. Duty ratio ≤ 1%

Note 2: I_B = Bias current (LD)

Note 3: Er = MAX $\left| 10 \cdot \log \frac{P_F}{P_F(25^\circ\text{C})} \right|$

THERMAL CHARACTERISTICS (T_{LD} = 25°C T_C = −15 ~ 65°C)

Symbol	Items	Conditions	Min.	Typ.	Max.	Unit
R _{th}	Thermister resistance	T _{LD} = 25°C	9.5	10	10.5	KΩ
B	B constant of thermister resistance	—	—	3250	—	K
ΔT	Cooling capacity	T _c = 65°C	40	—	—	°C
I _{pe}	Cooler current	ΔT = 40°C	—	0.6	1	A
V _{pe}	Cooler voltage	ΔT = 40°C	—	1.6	2	V

