

NLK1U5EAAA

1625-1670 nm DFB laser diode in a butterfly-type 14 pin package with thermo-electric cooler.
Pigtail fiber is connectorized with an FC/PC connector.

FEATURES

- * Wavelength Range 1625 - 1670 nm, ITU-T grid wavelength
- * Fiber Output Power 10mW

ABSOLUTE MAXIMUM RATINGS($T_{sub}=25deg.C$)

| Parameter | Symbol | Ratings | Units |
|-----------------------------|------------|-----------|-------|
| Laser diode reverse voltage | V_R | 2.0 | V |
| Laser diode forward current | I_F | 225 | mA |
| Operating case temperature | T_{case} | -5 to 70 | deg. |
| Storage temperature | T_{stg} | -40 to 85 | deg. |
| Photodiode reverse voltage | V_{DR} | 10 | V |
| Photodiode forward current | I_{DF} | 10 | mA |
| Peltier current | I_P | 1.4 | A |

ELECTRICAL/OPTICAL CHARACTERISTICS($T_{sub}=25deg.C$)

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Units |
|-----------------------------|-----------------|-------------------------------|------|-------|------|------------|
| Forward voltage | V_F | $I_F=30mA$ | | 1.2 | 1.6 | V |
| Threshold current | $I_{(TH)}$ | CW | | 15 | 20 | mA |
| Fiber output power | ϕ_e | CW, $I_F=100mA$ | 10 | | | mW |
| Peak wavelength | λ_p | CW, $\phi_e=10mW$ | -1 | ITU-T | +1 | nm |
| Spectral linewidth* | $\Delta\nu$ | CW, $\phi_e=10mW$ | | 2 | | MHz |
| Side mode suppression ratio | SMS | CW, $\phi_e=10mW$ | 35 | | | dB |
| Monitoring Current(PD) | $I_{R(E)}$ | CW, $\phi_e=10mW$ | 0.1 | | | mA |
| Dark current(PD) | $I_{r(0)}$ | CW, $V_{DR}=5V$ | | | 100 | nA |
| Tracking error | E_R | $I_{R(E)}=constant$ | -0.5 | | +0.5 | dB |
| Cooling capacity* | ΔT_{PE} | $\phi_e=10mW, T_{case}=70deg$ | 45 | | | deg. |
| Peltier current | I_{PE} | $T_{case}=-5 to 70deg.$ | | | 1 | A |
| Peltier voltage | V_{PE} | $T_{case}=-5 to 70deg.$ | | | 2 | V |
| Thermister resistance* | R | $T_{sub}=25deg.$ | | 10 | | k Ω |
| Isolation* | I_s | $T_{sub}=25deg.$ | | 30 | | dB |

$$\Delta T = | T_{case} - T_{sub} |$$

* Data is not attached.



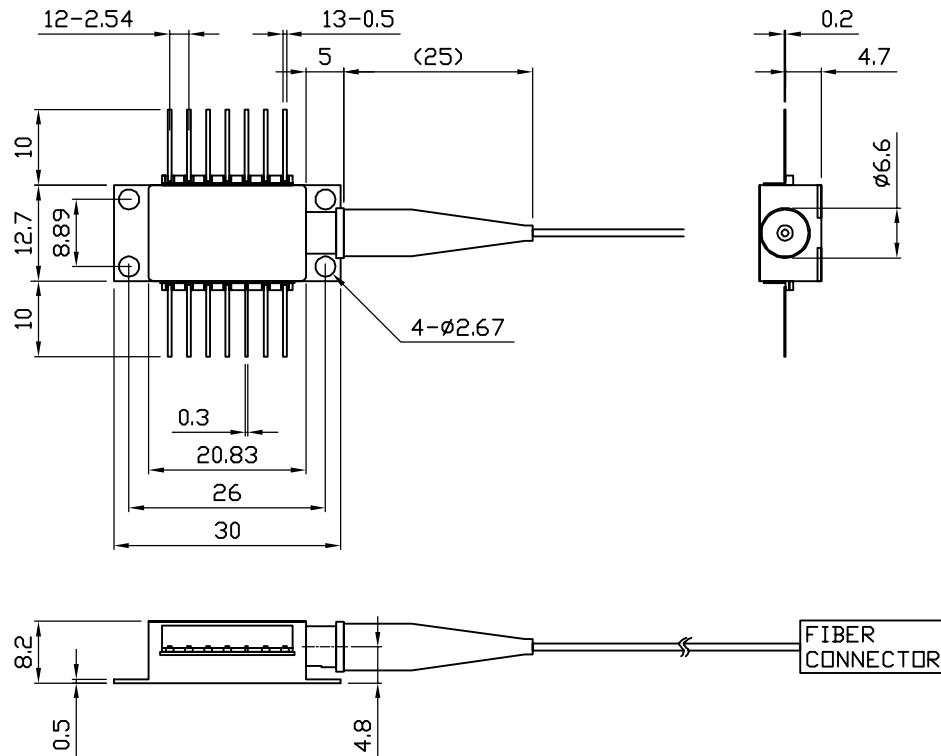
WARNING

If you plan to use these products in equipment which could endanger lives in the event of a product failure, please consult an NEL engineer before usage. Improper application of these products may endanger life. To avoid possible iniurv. make certain these products are used in a redundant configuration.

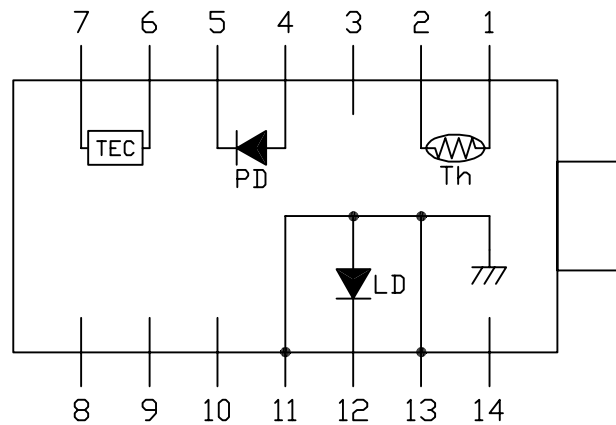
- 1 These products are subject to export regulations and restricitions set force by the Japanese Government.
- 2 NTT Electronics Corporation reserves the right to make changes in design,specification or related information at any time without prior notice.
- 3 The characteristics which are not specified in the data sheet are not guaranteed.
- 4 The characteristics under the different operation conditions from the ones specified in the data sheet are not guara

Outline Diagram [mm]

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Schematic Diagram (Top View)



Pin Connection

| No. | Description | No. | Description |
|-----|----------------|-----|------------------------|
| 1 | Thermistor | 8 | NC |
| 2 | Thermistor | 9 | NC |
| 3 | NC | 10 | NC |
| 4 | PD Anode (-) | 11 | Case Ground (LD Anode) |
| 5 | PD Cathode (+) | 12 | LD Cathode (-) |
| 6 | Cooler (+) | 13 | Case Ground (LD Anode) |
| 7 | Cooler (-) | 14 | NC |