



DWM51654FA6 – 515nm/650nm Dual Wavelength Coaxial Laser Module, Ø15mm Housing, <5mW Output Power

Data Sheet



Overview

The Lasermate DWM51654FA6 is a dual wavelength coaxial laser module integrating a 515nm green laser and a 650nm red laser into a single, precisely aligned beam. With output power under 5mW, this compact and lightweight module fits in a Ø15mm cylindrical housing, making it ideal for applications requiring visible dual-color laser output with stable performance. Designed with Automatic Power Control (APC) IC inside, the DWM51654FA6 offers excellent output stability, beam quality, and ease of integration for alignment, positioning, targeting, measurement, and custom OEM solutions.

Features

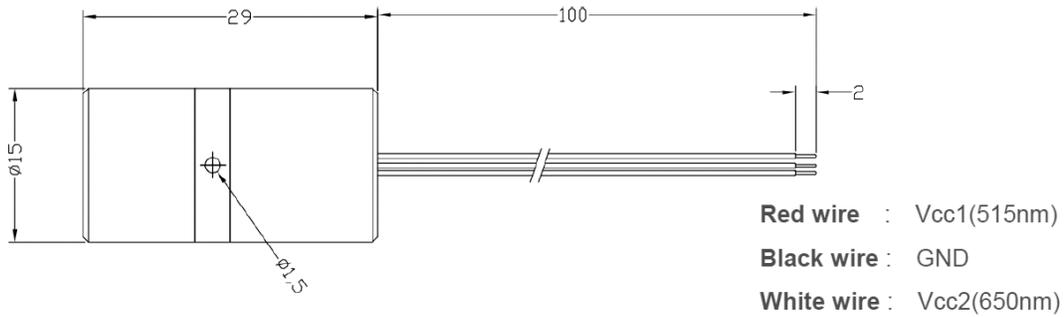
- Dual wavelength output: 515nm (green) and 650nm (red)
- Coaxial beam – both wavelengths combined into one output
- Output power <5mW
- Integrated Automatic Power Control (APC) IC
- Produces a high-quality, focused laser beam
- Compact size: Ø15mm x L29mm
- Lightweight and easy to install in OEM systems

Specifications

| Absolute Maximum Ratings | | | |
|--------------------------|-----------|---------|------|
| Parameter | Symbol | Rating | Unit |
| Power supply voltage | V_{CC} | 6 | V |
| Optical output power | P_o | <5 | mW |
| Operation temperature | T_{opr} | 0 to 50 | °C |
| Storage temperature | T_{stg} | 0 to 85 | °C |

| Electrical and Optical Characteristics ($T_c=25^\circ\text{C}$) | | | | | | |
|---|-------------|------|------|-------|------|--|
| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
| Wavelength-515nm | λ_1 | 515 | 520 | 530 | nm | $P_o = 3\text{mW}$ |
| Wavelength-650nm | λ_2 | 645 | 655 | 660 | nm | $P_o = 3\text{mW}$ |
| Output power-515nm | P_{out1} | 2 | | 4 | mW | |
| Output power-650nm | P_{out2} | 2 | | 4 | mW | |
| Operation current-515nm | I_{op1} | - | - | 100 | mA | $P_o = 3\text{mW}, V_{CC} = 6\text{V}$ |
| Operation current-650nm | I_{op2} | - | - | 45 | mA | $P_o = 3\text{mW}, V_{CC} = 6\text{V}$ |
| Operation voltage | V_{op} | - | 6 | 6.5 | Volt | |
| Laser beam spot size at 10m | | | | <20mm | | |
| Divergence angle | | | | 2mrad | | |

*Sufficient heat dissipation is required for CW operation.

Outline Dimensions (unit: mm)**Additional Notes**

- The laser modules are designated solely as OEM components for incorporation into the customer's end products. Therefore, it is the customer's responsibility to comply with the appropriate requirements of FDA 21CFR, section 1040.10 and 1040.11 for complete laser products. For the code of FDA regulations, please refer to [FDA Performance Standards for Light-Emitting Products](#) for detailed information.
- Specifications are subject to change without notice.