

BW10-1060-T-TO



BANDWIDTH10, LTD.

Description:

Bandwidth10's, BW10-1060-T-TO, is part of a family of wavelength tunable lasers based on the innovative High Contrast Grating (HCG) single mode 1060 nm VCSEL.

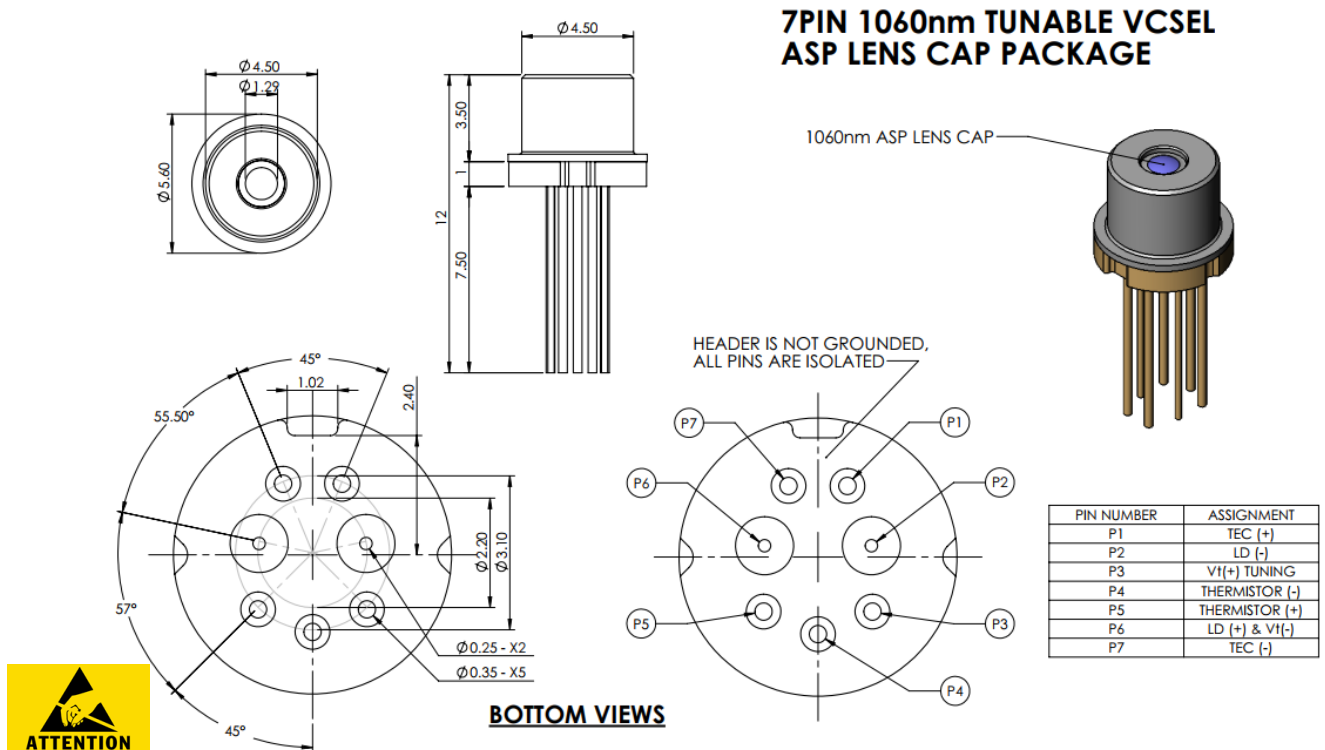
Applications:

- Optical Coherence Tomography (OCT)
- Swept source
- Medical Imaging
- Optical sensing
- Tunable Diode Laser Absorption Spectroscopy (TDLAS)

Features:

- TO-56 7Pin Small Form Footprint
- ASP lens cap
- Integrated TEC (Temperature Stabilization)
- Minimum CW optical power of 0.1 mW (@25°C TEC Temperature)
- Single Mode, single lobe VCSEL
- Wavelength Tuning Range: up to 50+ nm
- Fast Wavelength Tuning +200 kHz

Dimensional Drawing and Pin Assignment



CAUTION: Device is sensitive to electrostatic discharge.

Absolute Maximum Ratings

| Parameter | Symbol | Ratings | Unit |
|----------------------------|------------|---------------|------|
| Storage Temperature | T_{stg} | -20 to +100 | °C |
| Operating Case Temperature | T_c | -5 to +55 | °C |
| Forward Current of VCSEL | I_{LD} | 6 mA | mA |
| Reverse Current of VCSEL | I_{LDRS} | 0 | mA |
| Reverse Voltage of VCSEL | V_{LD} | 0 | V |
| Soldering Temperature | T_{sld} | 350 (10 sec.) | °C |

Operating Conditions

| Parameter | Symbol | Values | | | Unit |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------|---------------|---------------|----------|
| | | Min | Typical | Max | |
| Optical Output Power At 25°C TEC temp. over tuning range | P_o | 0.1 | 0.5 | | mW |
| Operating Current | I_{LD} | 0 | 5 | 6 | mA |
| Operating TEC Temperature | T_{op} | 5 | 25 | 30 | °C |
| TEC maximum Current | I_{TEC} | | 0.5 | 0.6 | A |
| TEC voltage | V_{TEC} | | 0.35 | 1.5 | V |
| Center wavelength Please specify desired center wavelength in the purchase order | λ | 1030 | | 1070 | nm |
| Guaranteed Tuning Range Applying a negative voltage will decrease peak wavelength. Minimum tuning range is specified in part number: 30 nm: BW10-1060-T-TO-30 50 nm: BW10-1060-T-TO-50 | $\Delta\lambda$ | 30 | | | nm |
| | | 50 | | | |
| Threshold Current over tuning range | I_{th} | | 1 | 4.5 | mA |
| Laser Drive Voltage | V_{CC} | 0 | 3 | 6 | V |
| Differential Resistance | R_d | | 500 | 700 | Ω |
| Mechanical Tuning Response | f_{max} | 100 | 200 | | kHz |
| Side-mode suppression ratio | SMSR | 20 | | | dB |
| Tuning Voltage | V_{tune} | 0 | See test data | See test data | V |

| | | | | | |
|----------------|-------------------|---|--|-----|----|
| Tuning Current | I_{tune} | 0 | | 0.1 | mA |
|----------------|-------------------|---|--|-----|----|

Contact Information

| Model Number | Contact Information | Unit |
|------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
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