

1.5 μ m Gain Chip (chip on sub-mount) AE5T310BY10P

AE5T310BY10P is 1.5 μ m InGaAsP / InP Gain Chip for External Cavity Laser developed as a light source for optical fiber communication or optical sensing.

◆ FEATURES

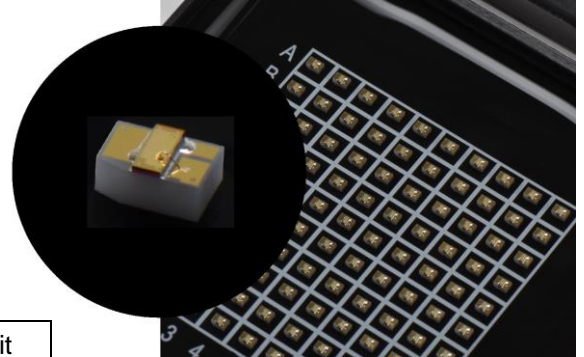
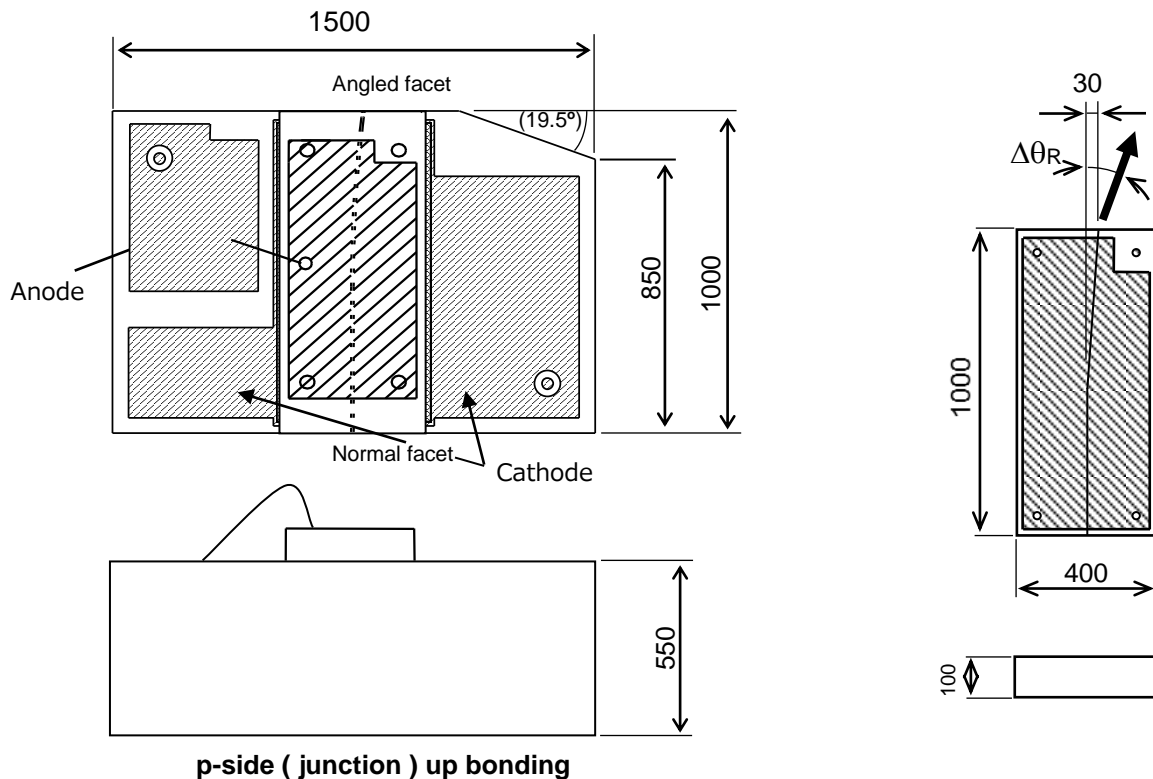
- Broad band: >100 nm tuning range (Center Wavelength=1550 nm)
- High Optical Output Power: >40 mW with external cavity
- Low spectral ripple
- Normal facet reflectance: LR (6%)

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

| Item | Symbol | Rating | Unit |
|---------------------------------|------------------|---------|------|
| Forward Current | I _F | 500 | mA |
| LD Reverse Voltage | V _R | 2 | V |
| Operating Case Temperature* | T _C | +15~+45 | °C |
| Storage Temperature | T _{stg} | -40~+85 | °C |
| Process/Soldering Temp. vs Time | | | |
| Maximum duration 20s | - | 300 | °C |
| Maximum duration 2hour | - | 200 | °C |
| Maximum duration 100hour | - | 120 | °C |
| ESD(Human Body Model) | ESD | 500 | V |

*No condensation

◆ DIMENSIONS (Unit : μ m)



◆ OPTICAL AND ELECTRICAL CHARACTERISTICS (T_C=25°C)

| Item | Symbol | Test condition | Min. | Typ. | Max. | Unit |
|--|-------------------------------|-------------------------------|------|------|------|------|
| Forward Voltage | V _F | IF =200 mA, pulsed (tw=50 μs) | - | 1.4 | 2.0 | V |
| ASE Output Power | P _{ASE} | IF =200 mA, pulsed (tw=50 μs) | 1 | 5 | - | mW |
| Center Wavelength | λ _C | IF =100 mA, pulsed (tw=50 μs) | 1480 | - | 1540 | nm |
| ASE Ripple | M | IF =100 mA, CW at λ=1510 nm | - | - | 2.0 | dB |
| Beam Exit Angle | Δθ _R | IF =200 mA CW | 19 | 20 | 21 | deg. |
| Beam Divergence Angle Transverse (perpendicular), Normal Facet | θ _t ^{NOR} | IF =200 mA CW, FAHM | 15 | 20 | 25 | deg. |
| Beam Divergence Angle Lateral (parallel), Normal Facet | θ _p ^{NOR} | IF =200 mA CW, FAHM | 17 | 20 | 23 | deg. |
| Beam Divergence Angle Transverse (perpendicular), Angled Facet | θ _t ^{ANG} | IF =200 mA CW, FAHM | 26 | 29 | 32 | deg. |
| Beam Divergence Angle Lateral (parallel), Angled Facet | θ _p ^{ANG} | IF =200 mA CW, FAHM | 15 | 18 | 21 | deg. |

◆ TECHNICAL SPECIFICATIONS

| Item | Symbol | Test condition | Min. | Typ. | Max. | Unit |
|--------------------------|------------------|----------------|------|--------------------|------------------|------|
| Angled facet Reflectance | R ^{ANG} | C-band | - | 5x10 ⁻⁵ | 10 ⁻⁴ | - |
| Normal facet Reflectance | R ^{NOR} | C-band | 5 | 6 | 7 | % |
| Chip Length | | | 0.98 | 1.00 | 1.02 | mm |
| Chip Width | | | 0.38 | 0.40 | 0.42 | mm |
| Chip Height | | | 0.09 | 0.10 | 0.11 | mm |



CAUTION : Handle the fiber of the enclosed device(s) with extreme care ; glass fiber is subject to breakage if mishandled and permanent damage to the device may result. Do not pull the device by the fiber or protective sleeve.
Do not coil the fiber into a loop of than 30 mm in radius.

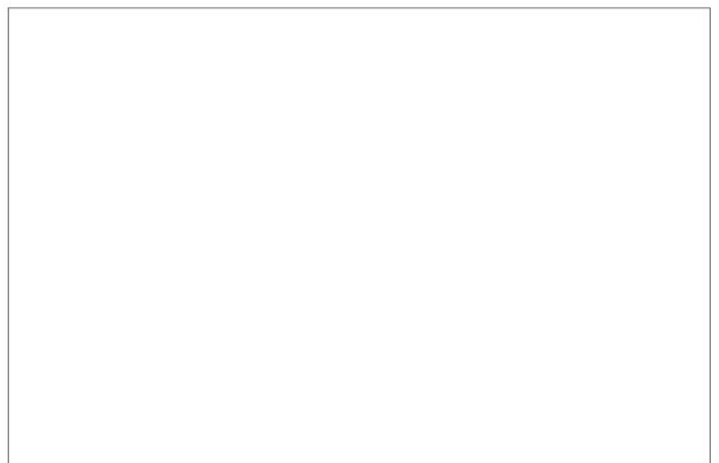
| | |
|---|--|
| <p>SEMICONDUCTOR LASER</p> | |
| <p>AVOID EXPOSURE Invisible laser radiation is emitted from this aperture</p> | <p>INVISIBLE LASER RADIATION AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION</p> <p> OUTPUT POWER 500mW WAVELENGTH 0.80 to 1.80 μm CLASS IIIb LASER PRODUCT</p> |
| <p>Caution - use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure. This Product Complies with 21 CFR 1040.10 and 1040.11 Manufactured Anritsu Corp. 5-1-1 Onna, Atsugi-shi, Kanagawa, Japan</p> | |

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