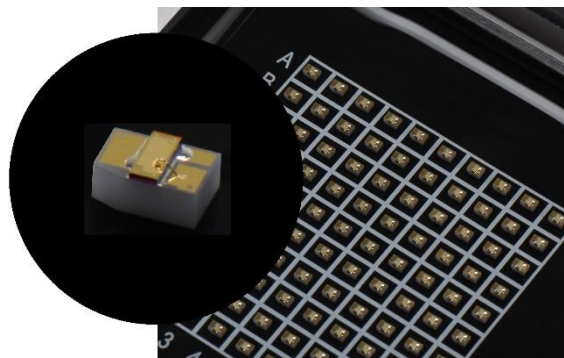


1.5 μm Gain Chip (chip on sub-mount) **AE5T310BY10P**

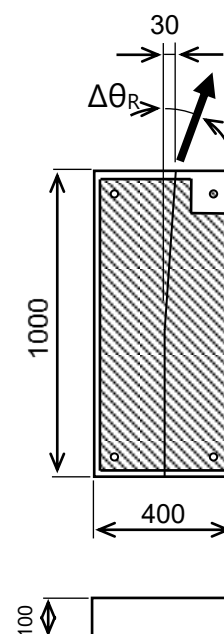
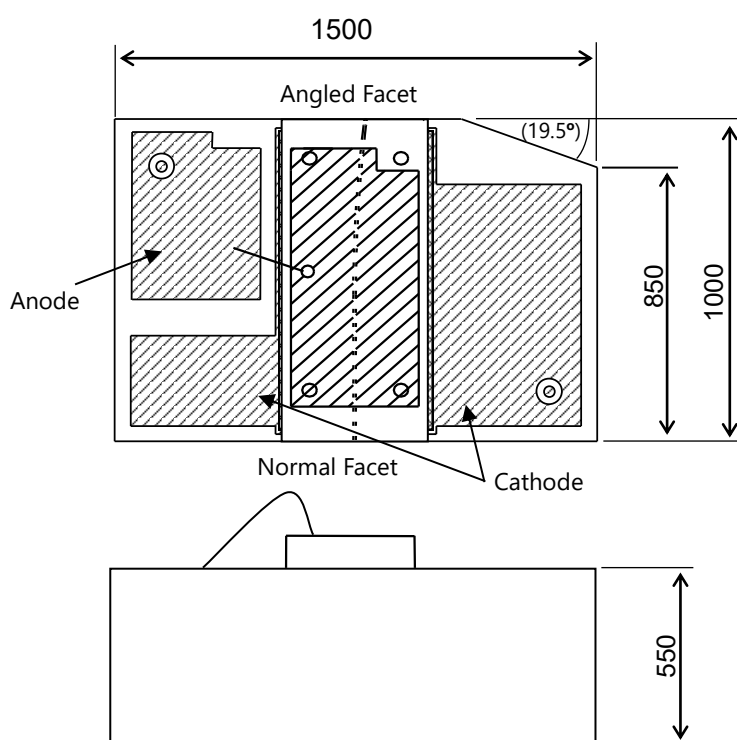
AE5T310BY10P is 1.5 μm InGaAsP/InP Gain Chip for External Cavity Laser developed as a light source for optical fiber communication or optical sensing.

FEATURES

- Wide Bandwidth: >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%)



DIMENSIONS



p-side (junction) up bonding

(Unit : μm)

ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Ratings	Unit
Forward Current	I_F	500	mA
LD Reverse Voltage	V_R	2	V
Operating Case Temperature*	T_C	+15 to +45	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-40 to +85	$^{\circ}\text{C}$
Process/Soldering Temp. vs Time	—	20	s
300 $^{\circ}\text{C}$		2	hour
200 $^{\circ}\text{C}$		100	hour
120 $^{\circ}\text{C}$			
ESD (Human Body Model)	ESD	500	V

* Exceeding the absolute maximum ratings may cause device failure.

*1 No condensation

OPTICAL AND ELECTRICAL CHARACTERISTICS ($T_{LD} = 25^{\circ}\text{C}$)

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F = 200\text{ mA}$, pulsed ($t_w = 50\text{ }\mu\text{s}$)	–	1.4	2.0	V
ASE Output Power	P_{ASE}	$I_F = 200\text{ mA}$, pulsed ($t_w = 50\text{ }\mu\text{s}$)	1	5	–	mW
Center Wavelength	λ_C	$I_F = 100\text{ mA}$, pulsed ($t_w = 50\text{ }\mu\text{s}$)	1480	–	1540	nm
ASE Ripple	M	$I_F = 100\text{ mA}$, CW, $\lambda_C = 1510\text{ nm}$	–	–	2.0	dB
Beam Exit Angle	$\Delta\theta_R$	$I_F = 200\text{ mA}$, CW	19	20	21	deg.
Beam Divergence Angle Transverse (perpendicular), Normal Facet	θ_t^{NOR}	$I_F = 200\text{ mA}$, CW, FAHM	–	20	–	deg.
Beam Divergence Angle Lateral (parallel), Normal Facet	θ_p^{NOR}	$I_F = 200\text{ mA}$, CW, FAHM	–	20	–	deg.
Beam Divergence Angle Transverse (perpendicular), Angled Facet	θ_t^{ANG}	$I_F = 200\text{ mA}$, CW, FAHM	26	29	32	deg.
Beam Divergence Angle Lateral (parallel), Angled Facet	θ_p^{ANG}	$I_F = 200\text{ mA}$, CW, FAHM	15	18	21	deg.

* Hermetic sealing is recommended for long term reliability.

TECHNICAL SPECIFICATIONS

Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Angled facet Reflectance	R^{ANG}	C-band	–	5×10^{-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.

SEMICONDUCTOR LASER

AVOID EXPOSURE
Invisible laser radiation is emitted from this aperture

INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR SCATTERED RADIATION

OUTPUT POWER 500mW
WAVELENGTH 0.80 to 1.80 μm
CLASS IIIb LASER PRODUCT

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



ANRITSU CORPORATION

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Contact URL

<https://www.anritsu.com/en-gb/sensing-devices/contact-us>

Please read "Notes on Handling Optical Devices" before use.

<https://www.anritsu.com/sensing-devices/guide/optdevices-handling>



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