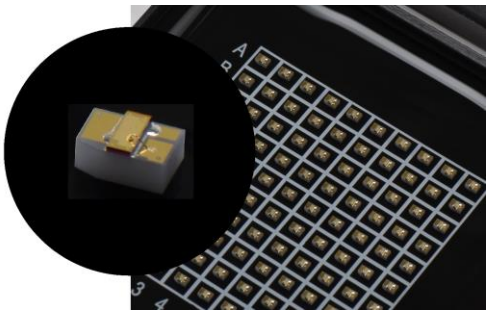
1.5µm Gain Chip (chip on sub-mount) *AE5T310BY60P*

AE5T310BY60P is 1.5µm 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 (CL-band)
- High Optical Output Power: >40 mW with external cavity
- Low spectral ripple
- Normal facet reflectance: LR (6%)



♦OPTICAL AND ELECTRICAL CHARACTERISTICS (T_{LD}=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)	1530	-	1590	nm
ASE Ripple	M	IF =100 mA, CW at λ_C=1560 nm	-	-	2.0	dB
Beam Exit Angle	$\Delta\theta_R$	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.

*We recommend using Gain Chip in an airtight seal for long-term reliability.

♦ABSOLUTE MAXIMUM RATINGS (T$_{LD}$=25°C)

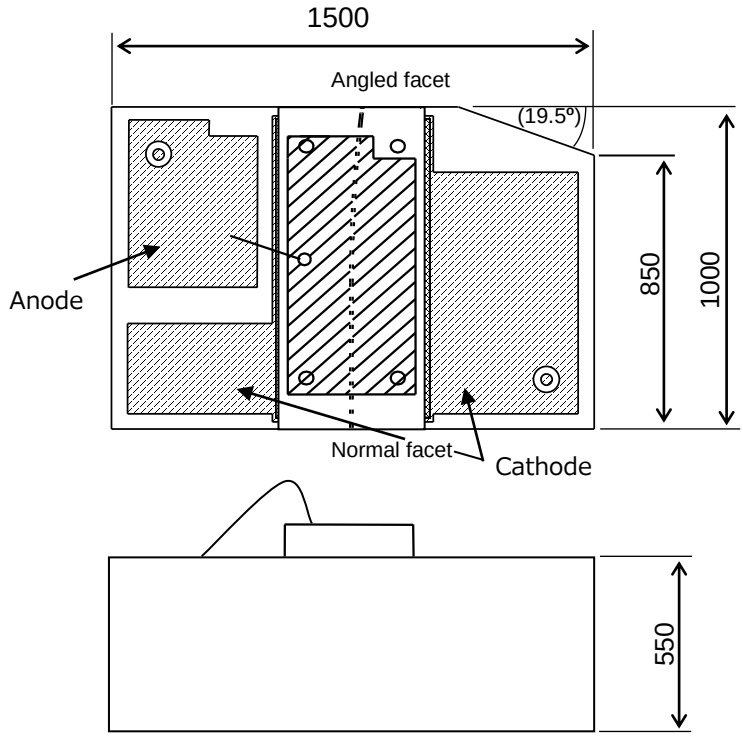
Item	Symbol	Rating	Unit
LD Forward Current	I_F	500	mA
LD Reverse Voltage	V_R	2	V
Operating Case Temperature*	T_C	+15～+45	°C
Storage Temperature	T_{stg}	-40～+85	°C
Process/Soldering Temp. vs Time Maximum duration 20s Maximum duration 2hour Maximum duration 100hour	-	 300 200 120	 °C °C °C
ESD(Human Body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

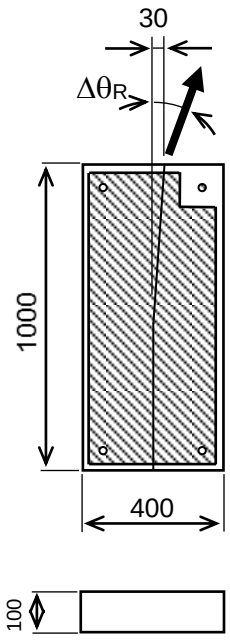
*No condensation

♦TECHNICAL SPECIFICATIONS

Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Angled facet Reflectance	R^{ANG}	CL-band	-	$5x10^{-5}$	10^{-4}	-
Normal facet Reflectance	R^{NOR}	CL-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

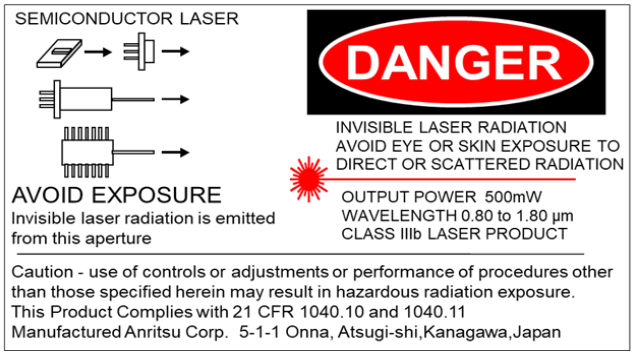
♦DIMENSIONS (Unit : μm)





p-side (junction) up bonding

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.



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