

☆New product  
★Under development



## ■ Laser Diodes

### ◆ Main Lineup

#### <Visible Light Laser Diodes>

Features		Low-cost type	Compact type	Standard type	Wide operating temperature range
Package		④ t1.8 mm Frame	② ø3.8 mm Can	① ø5.6 mm Can	
Oscillation transverse mode		Single Mode			
Operating temperature range (°C)		-10 to +60			-40 to +85
Wavelength	R: 638 nm	<b>GH1631AA8C</b> 100 mW (CW)	<b>GH0631IA5G</b> 150 mW (CW)	<b>GH0631IA2GC</b> 180 mW (CW)	<b>★GH0632BA2G</b> 200 mW (CW)
	G: 520 nm	—	☆ <b>GH05280E5G</b> 80 mW (CW)	☆ <b>GH05280E2K</b> 80 mW (CW)	—*1
	B: 450 nm	—	☆ <b>GH04580A5G</b> 80 mW (CW)	<b>GH04580A2G</b> 80 mW (CW)	—*1

\*1 We plan to introduce a product with a wide operating temperature range.

#### <Infrared Laser Diodes>

Features		High beam grade	High output	Pulse 30 W class	Pulse 90 W class
Package		① ø5.6 mm Can			
Oscillation transverse mode		Single Mode	Multi Mode		
Operating temperature range (°C)		-10 to +70		-40 to +85	
Wavelength	IR: 830 nm	<b>★GH0832FA2G</b> 250 mW (CW)	—	—	—
	IR: 850 nm	—	<b>★GH0852WA2G</b> 700 mW (CW)	—	—
	IR: 905 nm	—	—	<b>★GH09W30A2G</b> 30 W (Pulse)	<b>★GH09W90A2G</b> 90 W (Pulse)
	IR: 940 nm	<b>★GH0942FA2G</b> 250 mW (CW)	<b>★GH0942WA2G</b> 700 mW (CW)	—	—

#### <Infrared Eye-safe Laser Diodes\*2>

Features		Highly reliable and eye-safe
Package		⑥ ø5.6 mm eye-safe
Oscillation transverse mode		Multi Mode
Operating temperature range (°C)		-10 to +70
Wavelength	IR: 850 nm	☆ <b>GH4854B3TG</b> 410 mW (CW)
	IR: 940 nm	<b>★GH4944D3TG</b> 430 mW (CW)

\*2 Laser with improved safety for eyes.

#### <notes>

GHxxxxxxx xx mW (CW)
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Upper line: Model No.

Lower line: Light output ratings at 25°C

☆New product  
★Under development



## ◆Specifications <Laser Diodes>

(Tc = 25°C)

Package	Model No.	Wavelength (band) λp (nm)	Absolute maximum ratings <sup>*1</sup>		Characteristics								Built-in monitor PD	Terminal connections	Applications		
			Po (mW)	Top (°C)	Po (mW)	Ith (mA)	Iop (mA)	Vop (V)	ηd (mW/mA)	λp (nm)	θ// <sup>*2</sup> (°)	θ⊥ <sup>*2</sup> (°)					
① ø5.6 mm Can	☆GH0401FA2K	405	155	-10 to +75	150	40	130	5	1.7	405	9	19	○	4	Sensor, etc.		
	GH04W10A2GC		350	0 to +50	300	140	325	4.5	1.8	406	14 <sup>*3</sup>	41 <sup>*3</sup>	—	9			
		GH04580A2G	450	85	-10 to +70	80	22	84	5.1	1.3	450	10	24	—	8	Display, etc.	
		☆GH05030D2L	505	35	-10 to +60	30	30	75	6	0.65	505	8	23	—	12		
		☆GH05130G2K	515	35	-10 to +60	30	30	85	6.5	0.55	515	7.5	22	○	4		
		☆GH05280E2K	520	85	-10 to +60	80	65	180	6.5	0.7	520	7	23	○	4		
		☆GH0521DA2G		135		130	100	300	6.8	0.65			22.5	—	8		
		☆GH06330A2G	638	30	-10 to +60	30	30	50	2.3	1.4	638	7	16	—	8		
		GH0631IA2GC		185	-20 to +60	180	70	215	2.55	1.15			8				13
		★GH0632BA2G		210	-40 to +85	200	55	230	2.65	—			15				9
		GH0637AA2G		700	-10 to +40	700	110	810	2.46	—			16				35
		★GH0652CA2G	650	220	-40 to +90	200	55	220	2.6	—	650	8	12.5	—	9		
		GH06P25A1C	660	100	-10 to +70	95	40	122	2.4	1.1	661	—	—	—	3		
		GH0832BA1K	830	210	-10 to +70	200	35	215	2.1	1.1	830	9	18	○	4		
		★GH0832FA2G		260		250	45	255	2.2	1.15			8	15	—	8	
		★GH0852WA2G	850	700	-10 to +70	700	275	975	1.8	1	850	17	45	—	8		
	★GH09W30A2G	905	Pulse 40 W	-40 to +85	Pulse 30W	700	30A	11	1.14	905	15	20	—	8			
	★GH09W90A2G		Pulse 120 W		Pulse 90W	(tbd)		(tbd)	(tbd)			(tbd)			(tbd)	(tbd)	
	★GH0942FA2G	940	260	-10 to +70	250	(tbd)	(tbd)	(tbd)	(tbd)	940	(tbd)	(tbd)	—	8			
	★GH0942WA2G		700		700	315	800	1.8	1		10	35					
② ø3.8 mm Can	☆GH04580A5G	450	85	-10 to +70	80	22	84	5.1	1.3	450	10	24	—	8	Display, etc.		
	☆GH05280E5G	520	85	-10 to +60	80	65	180	6.5	0.7	520	7	23	—	8			
	☆GH0521DA5G		135	-10 to +50	130	100	300	6.8	0.65			22.5					
		GH0631CA5G	638	125	-10 to +60	120	70	195	—	—	638	9	15	—		8	
		GH0631IA5G		185		150	60	190	2.5	1.15			7.5				
③ ø3.3 mm Can	GH06510F4A	660	10	-10 to +70	7	17	26	2.2	0.85	660	13	28	○	1	Sensor, etc.		
	GH07P28F4C	785	150	-10 to +70	100	35	135	2.4	1	784	8	16	—	3			
④ t1.8 mm Frame	GH1631AA8C	638	100	-10 to +60	100	50	130	2.45	1.2	638	8	15	—	6	Display, etc.		
	GH16P32B8C	660	100	-10 to +70	90	42	120	2.3	1.16	661	9.3	15	—	6			
⑤ t1.2 mm Frame	GH16320AUL	638	20	-10 to +40	20	18	50	2.5	0.6	635	8	36	—	11	Display, etc.		

## <Eye-safe Laser Diodes<sup>\*4</sup>>

(Tc = 25°C)

Package	Model No.	Wavelength (band) λp (nm)	Absolute maximum ratings <sup>*1</sup>		Characteristics								Built-in monitor PD	Terminal connections	Applications
			Iop (A)	Top (°C)	Iop (mA)	Ith (mA)	oe (mW)	Vop (V)	ηd (mW/mA)	λp (nm)	θ// <sup>*2</sup> (°)	θ⊥ <sup>*2</sup> (°)			
⑥ ø5.6 mm eye-safe	☆GH4854B3TG	850	1	-10 to +70	800	250	410	2	0.75	850	100	100	—	8	Sensor, etc.
	★GH4944D3TG	940	1	-10 to +70	800	160	430	1.75	0.67	940	85	85			

\*1 The absolute maximum ratings are the limits that are not to be exceeded under any condition whatsoever, whether in testing or in actual use.

\*2 Full angle of 50% peak intensity.

\*3 Full angle of 13.5% (≠ 1/e<sup>2</sup>) peak intensity.

\*4 Laser with improved safety for eyes.

Note: Please inquire about combinations of packages and characteristics other than the above.

### Notice

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Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.



## ◆ Package Lineup

① ø5.6 mm Can

② ø3.8 mm Can

③ ø3.3 mm Can

④ t1.8 mm Frame

⑤ t1.2 mm Frame

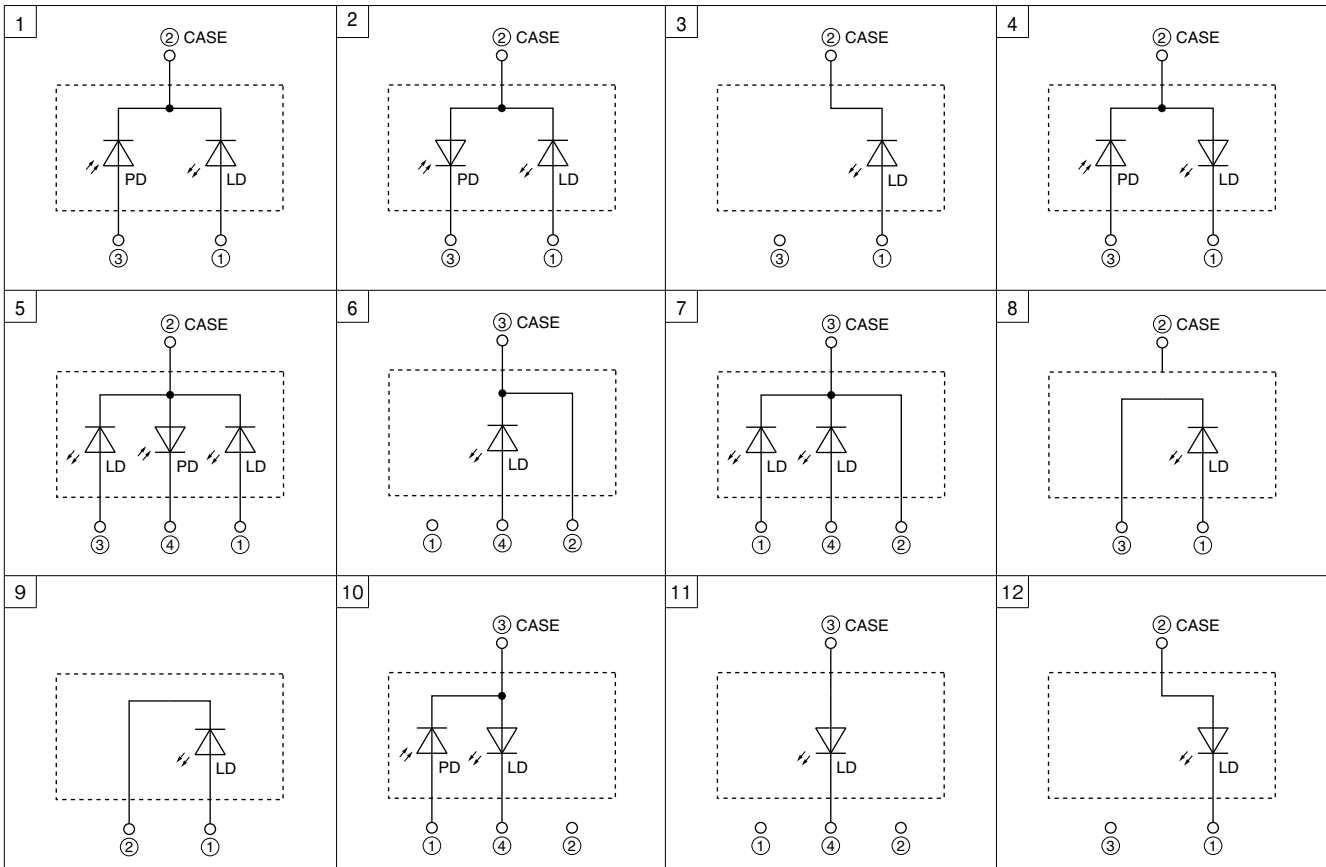


⑥ ø5.6 mm eye-safe\*



\* Laser with improved safety for eyes.

## ◆ Terminal Connections



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