

■ High-Luminosity (AlGaNp) LED Series

(Ta = 25°C)

Radiation color	Green	Yellow-green	Amber	Sunset orange	Orange	Red
Series	ZG, JG	ZE, JE	ZV, JV, YV	ZS, JS, YS	ZJ, JJ, YJ	ZR, JR
Dominant emission wavelength (nm)	(564)	(572)	(588)	(605)	(618)	(630)
Radiation material	AlGaNp on GaAs					

■ High-Luminosity (InGaN) LED Series

(Ta = 25°C)

Radiation color	Blue	Green
Series	BC	GC
Dominant emission wavelength (nm)	(470)	(525)
Radiation material	InGaN	

■ White Type LED Series

(Ta = 25°C)

Radiation color	White
Series	BW
Color range (x, y)	(0.31, 0.31)
Radiation material	InGaN + Fluorescent powder

■ Pastel Color LED Series

(Ta = 25°C)

Radiation color	Light blue	Lemon yellow	Purple
Series	CA	CY	CV
Color range (x, y)	(0.17, 0.20)	(0.42, 0.48)	(0.35, 0.15)
Radiation material	InGaN + Fluorescent powder		

■ LED Series

(Ta = 25°C)

Radiation color	Green	Yellow-green	Yellow-green (High-luminosity)	Yellow	Sunset orange	Red	Red (High-luminosity)	Red (High-luminosity)	Red
Series	KG, K	EG, E, C*	FG, F	HY, H	HS, S	HD, D	TR, T	UR, U	PR, P
Peak emission wavelength (nm)	555	565	565	585	610	635	660	660	695
Radiation material	GaP	GaP	GaP	GaAsP on GaP	GaAsP on GaP	GaAsP on GaP	GaAlAs on GaAs Single hetero	GaAlAs on GaAlAs Double hetero	GaP

* C is the opposite polarity of EG's.

■ High-Luminosity (AlGaNp) LED Lamps

(If = 20 mA, Ta = 25°C)

Appearance	Radiation shape (mm)	Resin type	High-luminosity											
			JG, ZG (Green)		JE, ZE (Yellow-green)		JV, ZV (Amber)		JS, ZS (Sunset orange)		ZJ, JJ (Orange)			
			Colored diffusion	Colored transparency	Colorless transparency	Milky diffusion	Model No.	Luminous intensity (mcd) TYP.	Model No.	Luminous intensity (mcd) TYP.	Model No.	Luminous intensity (mcd) TYP.		
Cylinder	ø3	●					GL3ZV402B0SE	400	GL3ZS402B0SE	400	GL3ZJ402B0SE	400	GL3ZR402B0SE	250
		●	GL3JG402B0SE	85	GL3JE402B0SE	200							GL3JR402B0S3	200
		●					GL3ZV802B0SE	200	GL3ZS802B0SE	210	GL3ZJ802B0SE	230	GL3ZR802B0SE	150
		●					GL3JV404B0SE	280	GL3JS404B0SE	280	GL3JJ404B0SE	200		
	ø5	●					GL3JV804B0SE	110	GL3JS804B0SE	120	GL3JJ804B0SE	100		
		●					GL5ZV152B0SE	2 700	GL5ZS152B0SE	3 000	GL5ZJ152B0SE	3 000	GL5ZR152B0SE	2 000
		●					GL5ZV302B0SE	900	GL5ZS302B0SE	1 000	GL5ZJ302B0SE	900	GL5ZR302B0SE	600
	ø10	●					GL5JV302B0SE	640	GL5JS302B0SE	680	GL5JJ302B0SE	570		
		●					GL0ZV042B0S	16 900	GL0ZS042B0S	22 600	GL0ZJ042B0S	18 500		
		●					GL6ZV27	750	GL6ZS27	850	GL6ZJ27	750	GL6ZR27	360
Oval	Long: 5.8 Short: 4.6	●					GL5JV7D2D0SE	210	GL5JS7D2D0SE	230	GL5JJ7D2D0SE	190		

Taped model is also available.

Notice	
In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc.	
Except where specially indicated, models listed on this page comply with the RoHS Directive*. For details, please contact SHARP.	
*RoHS Directive: Prohibits use of lead, cadmium, hexavalent chromium, mercury and specific brominated flame retardants (PBBs and PBDEs), with certain exceptions.	
Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.	

■ High-Luminosity LED Lamps

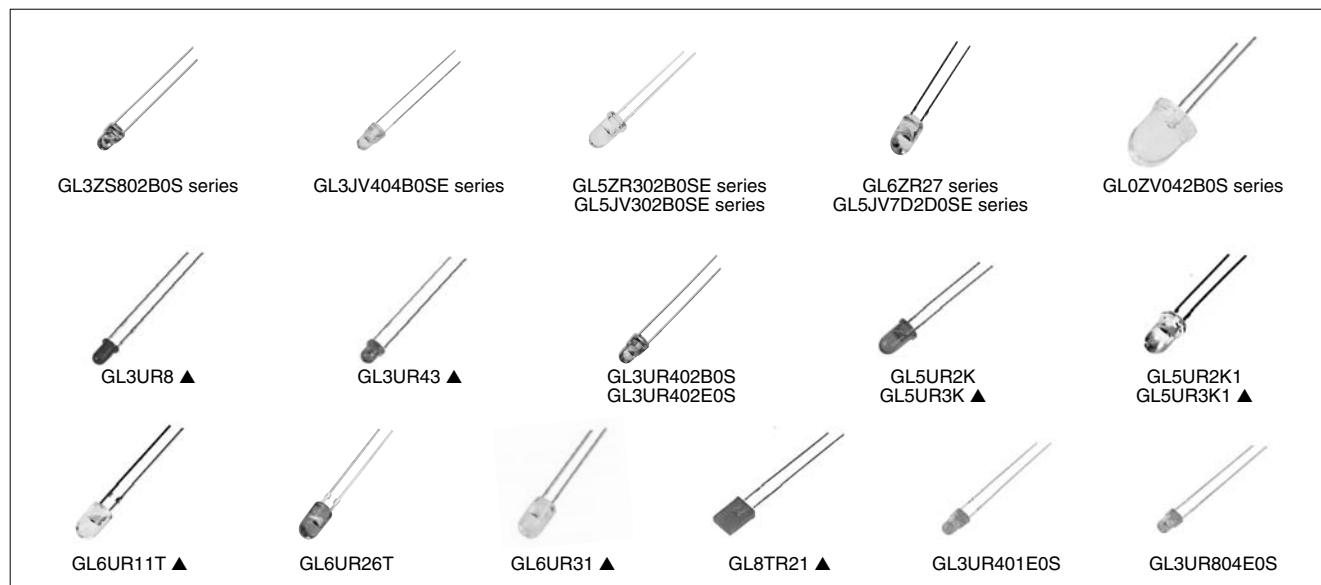
(If = 20 mA, Ta = 25°C)

Appearance	Radiation shape (mm)	Resin type		High-luminosity					
				BC (Blue)		GC (Green)		TR, T (Red)	
		Colored diffusion	Colored transparency	Colorless transparency	Milky diffusion	Model No.	Luminous intensity (mcd) TYP.	Model No.	Luminous intensity (mcd) TYP.
Cylinder	ø3	●						GL3TR8 ▲	60
		●						GL3UR8 ▲	300
			●					☆GL3UR401E0S	250
			●					GL3UR44 ▲	110
		●						GL3UR44 ▲	250
		●						☆GL3UR402E0S	300
			●					GL3UR43 ▲	20
			●			GL3BC302B0S2	900	GL3UR43 ▲	100
	ø5		●			GL3B2402B0SC	650	GL3G2402B0SC	2 800
		●						GL5TR8 ▲	80
Oval	Long: 5.8 Short: 4.6		●					GL5UR44	850
Rectangle	2.5 × 5.0	●						GL5UR2K	2 000
	1.8 × 3.9	●						GL5UR3K ▲	3 000

*1 With tie-bar

The model marked with ▲ may not be available in the near future. Contact with SHARP for details before use.

Taped model is also available.



Notice

In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc.

Except where specially indicated, models listed on this page comply with the RoHS Directive*. For details, please contact SHARP.

*RoHS Directive: Prohibits use of lead, cadmium, hexavalent chromium, mercury and specific brominated flame retardants (PBBs and PBDEs), with certain exceptions.

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

☆New product



■ LED Lamps (1)

(I_F = 20 mA^{*1}, Ta = 25°C)

Appearance	Radiation shape (mm)	Resin type		KG Green (555 nm)	JG Green (564 nm)	Luminous intensity (mcd) TYP.	EG Yellow-green (565 nm)	Luminous intensity (mcd) TYP.	FG Yellow-green (HL) (565 nm)	Luminous intensity (mcd) TYP.
		Colored diffusion	Colored transparency							
Cylinder	ø3	●	Colored transparency	GL3KG8 ▲	30		GL3EG8 ▲	60		
		●	Colorless transparency		☆GL3JG401EOS	80	☆GL3EG401EOS	80		
		●	Colored transparency				GL3EG41 ▲	130		
		●	Colorless transparency	GL3KG44 ▲	60		GL3EG44 ▲	130		
		●	Colored transparency		☆GL3JG402EOS	85	☆GL3EG402EOS	85		
		●	Colorless transparency	GL3KG43 ▲	20		GL3EG43 ▲	38		
		●	Colored transparency		☆GL3JG804EOS	40	☆GL3EG804EOS	40		
		●	Colorless transparency	GL3KG62 ▲	22		GL3EG62 ▲	65		
		●	Colored transparency		☆GL3JG404EOS	80	☆GL3EG404EOS	80		
		●	Colorless transparency	GL3KG63 ▲	6		GL3EG63 ▲	18		
Cylinder	ø4	●	Colored transparency	GL4KG8 ▲	30	☆GL4JG8	85	GL4EG8	100	
		●	Colorless transparency				GL5EG4 ▲	20		
		●	Colored transparency	GL5KG8 ▲	60	☆GL5JG8	140	GL5EG8	150	
		●	Colorless transparency	GL5KG41 ▲	70	☆GL5JG41	160	GL5EG41	160	
		●	Colored transparency	GL5KG44 ▲	70	☆GL5JG44	160	GL5EG44	160	
		●	Colorless transparency				GL5EG40	250		
		●	Colored transparency	GL5KG43 ▲	120	☆GL5JG43	360	GL5EG43	300	GL5FG43 ▲
		●	Colorless transparency				GL5EG60 ▲	23		600
		●	Colored transparency				GL6EG11T ^{*3} ▲	120		
		ø5 (Inverted cone)	●				GL5EG47 ▲	15		
Oval	Long: 5.8 Short: 4.6	●					GL6EG26T ^{*3}	140		
Convex	ø2	●					GL2EG6 ▲	15		
Arch	2.5 × 5.0	●					GL8EG2 ▲	30		
	2.0 × 3.1	●					GL8EG4 ▲	50		
Rectangle	1.8 × 3.9	●		GL8KG42 ▲	1.5		GL8EG42 ▲	5		
	1.9 × 3.9	●					GL8EG5 ▲	28		
	2.0 × 3.2	●		GL8KG25 ▲	9		GL8EG25 ▲	12		
	2.0 × 3.2	●		GL8KG29 ▲	5		GL8EG29 ▲	12		
	2.0 × 4.5	●					GL8EG23	6		
	2.0 × 5.0	●		GL8KG21 ▲	4	☆GL8JG21	7	GL8EG21	8	
	2.0 × 5.0	●		GL8KG26 ▲	4		GL8EG26 ▲	8		
Square	5.0 × 5.0	●		GL8KG22 ▲	3.5	☆GL8JG22	8	GL8EG22	6	
Triangle	Isosceles triangle	●								

*1 PR series (Red): I_F = 5 mA (GL8PR25, GL8PR29: I_F = 10 mA)

Taped model is also available.

*2 Taped model

*3 With tie-bar

HL: High-luminosity

The model marked with ▲ may not be available in the near future. Contact with SHARP for details before use.

Notice

In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc.

Except where specially indicated, models listed on this page comply with the RoHS Directive*. For details, please contact SHARP.

*RoHS Directive: Prohibits use of lead, cadmium, hexavalent chromium, mercury and specific brominated flame retardants (PBBs and PBDEs), with certain exceptions.

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

☆New product



■ LED Lamps (2)

(I_F = 20 mA^{*1}, Ta = 25°C)

Appearance	Radiation shape (mm)	Resin type		HY Yellow (585 nm)	HS Sunset orange (610 nm)	Luminous intensity (mcd) TYP.	HD Red (635 nm)	Luminous intensity (mcd) TYP.	PR Red (695 nm)	Luminous intensity (mcd) TYP.
		Colored diffusion	Colored transparency							
Cylinder	ø3	●		GL3HY8 ▲	55	GL3HS8 ▲	60	GL3HD8 ▲	40	GL3PR8 ▲
		●		☆GL3HY401E0S	60	☆GL3HS401E0S	60	☆GL3HD401E0S	60	
		●								
		●		GL3HY44 ▲	100	GL3HS44 ▲	100	GL3HD44 ▲	110	GL3PR44 ▲
		●		☆GL3HY402E0S	70	☆GL3HS402E0S	70	☆GL3HD402E0S	70	
		●		GL3HY43 ▲	25	GL3HS43 ▲	25	GL3HD43 ▲	25	GL3PR43 ▲
		●		☆GL3HY804E0S	30	☆GL3HS804E0S	30	☆GL3HD804E0S	30	
		●		GL3HY62 ▲	40	GL3HS62 ▲	40	GL3HD62 ▲	50	
		●		☆GL3HY404E0S	60	☆GL3HS404E0S	60	☆GL3HD404E0S	60	
		●		GL3HY63 ▲	16	GL3HS63 ▲	15	GL3HD63 ▲	17	GL3PR63 ▲
		●		LT3H31W*2 ▲	15			LT3D31W*2 ▲	15	LT3P31W*2 ▲
		●		LT3H65W*2 ▲	25	LT3S65W*2 ▲	25	LT3D65W*2 ▲	25	LT3P65W*2 ▲
	ø4	●		GL4HY8	110	GL4HS8	80	GL4HD8	110	GL4PR8 ▲
ø5	ø5	●						GL5HD4 ▲	25	GL5PR4 ▲
		●		GL5HY8	120	GL5HS8	80	GL5HD8	80	GL5PR8 ▲
		●		GL5HY41	100	GL5HS41	100	GL5HD41	150	GL5PR41 ▲
		●		GL5HY44	100	GL5HS44	100	GL5HD44	100	GL5PR44 ▲
		●		GL5HY40	250	GL5HS40	200	GL5HD40	250	GL5PR40 ▲
		●		GL5HY43	250	GL5HS43	250	GL5HD43	300	
		●	●					GL5HD60 ▲	8	
	ø5 (Inverted cone)	●				GL5HS47 ▲	6	GL5HD47 ▲	8	
Oval	Long: 5.8 Short: 4.6	●								
Convex	ø2	●		GL2HY6 ▲	12			GL2HD6 ▲	12	GL2PR6 ▲
Arch	2.5 × 5.0	●						GL8HD2 ▲	30	
	2.0 × 3.1	●						GL8HD4 ▲	40	
Rectangle	1.8 × 3.9	●		GL8HY42 ▲	6			GL8HD42 ▲	5	GL8PR42 ▲
	1.9 × 3.9	●		GL8HY5 ▲	25			GL8HD5 ▲	22	
	2.0 × 3.2	●		GL8HY25 ▲	12	GL8HS25 ▲	10	GL8HD25 ▲	12	GL8PR25 ▲
	2.0 × 3.2	●		GL8HY29 ▲	10	GL8HS29 ▲	7			GL8PR29 ▲
	2.0 × 4.5	●		GL8HY23	8			GL8HD23	6	
	2.0 × 5.0	●		GL8HY21	8	GL8HS21	8	GL8HD21	8	GL8PR21 ▲
	2.0 × 5.0	●		GL8HY26 ▲	8			GL8HD26 ▲	8	GL8PR26 ▲
Square	5.0 × 5.0	●		GL8HY22	5	GL8HS22	5	GL8HD22	8	GL8PR22 ▲
Triangle	Isosceles triangle	●								GL8PR28 ▲
										0.9

*1 PR series (Red): I_F = 5 mA (GL8PR25, GL8PR29: I_F = 10 mA)

Taped model is also available.

*2 Taped model

The model marked with ▲ may not be available in the near future. Contact with SHARP for details before use.

Notice

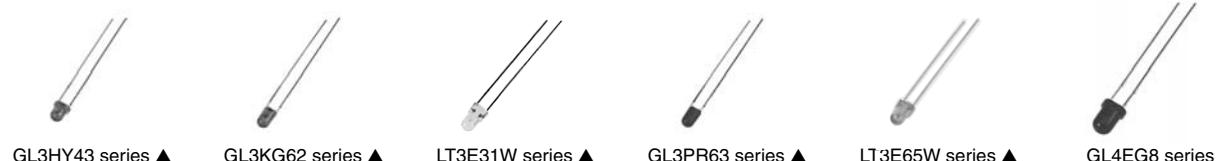
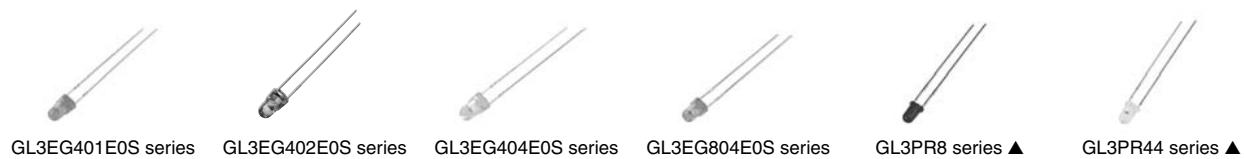
In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc.

Except where specially indicated, models listed on this page comply with the RoHS Directive*. For details, please contact SHARP.

*RoHS Directive: Prohibits use of lead, cadmium, hexavalent chromium, mercury and specific brominated flame retardants (PBBs and PBDEs), with certain exceptions.

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

Cylinder



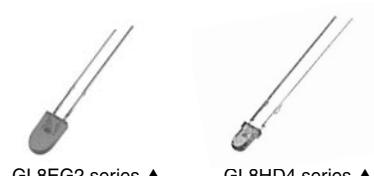
Oval



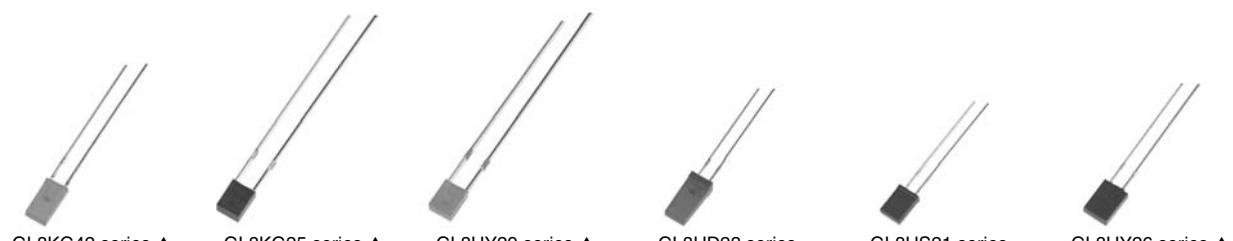
Convex



Arch



Rectangle



Square



Triangle



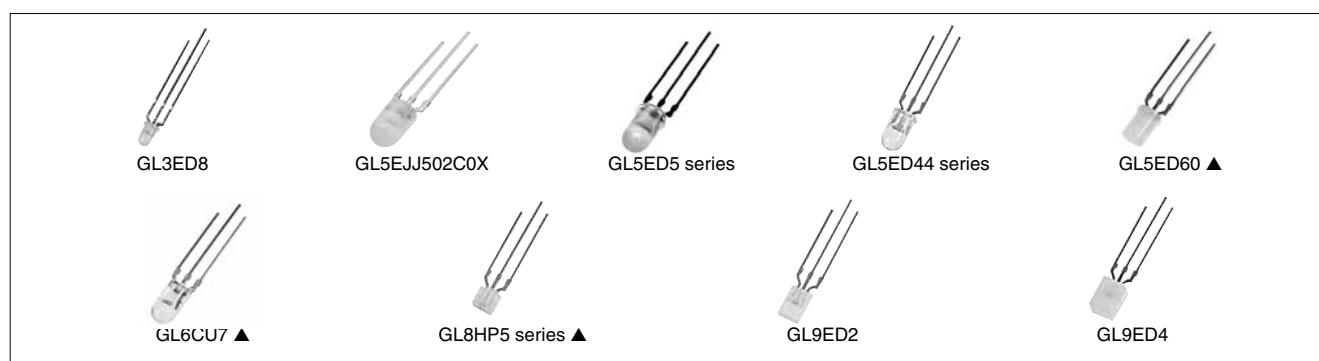
Notice

In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc.
 Except where specially indicated, models listed on this page comply with the RoHS Directive*. For details, please contact SHARP.
 *RoHS Directive: Prohibits use of lead, cadmium, hexavalent chromium, mercury and specific brominated flame retardants (PBBs and PBDEs), with certain exceptions.
 Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.

■ Dichromatic LED Lamps

(The values in luminous intensity are radiation color order) (I_F = 20 mA¹, Ta = 25°C)

Appearance	Radiation shape (mm)	Resin type		E JJ Yellow-green + Orange (HL)	C U* Yellow-green + Red (HL)	E P Yellow-green + Red	E D Yellow-green + Red	E H Yellow-green + Yellow	H P Yellow + Red	
		Colored diffusion	Colored transparency							
Cylinder	ø3	●					GL3ED8	20/15		
	ø5		GL5EJJ502C0X ^{*2}	110/170		GL5EP5 ▲	40/9	GL5ED5	40/25	GL5HP5 ▲
					GL5CU44 ▲	100/240		GL5ED44	80/50	
							GL5ED60 ▲	11/8		
Rectangle	1.9 × 3.9						GL8ED5 ▲	10/6.5		GL8HP5 ▲
	2.0 × 5.0						GL9ED2	8/3	GL9EH2 ▲	6/2
	5.0 × 5.0						GL9ED4	7/4		GL9HP2 ▲
<p>* CU series: Common anode pin connection *1 P (Red) and H (yellow): I_F = 10 mA *2 Taped model The model marked with ▲ may not be available in the near future. Contact with SHARP for details before use.</p>										



Notice

In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc.
 Except where specially indicated, models listed on this page comply with the RoHS Directive*. For details, please contact SHARP.
 *RoHS Directive: Prohibits use of lead, cadmium, hexavalent chromium, mercury and specific brominated flame retardants (PBBs and PBDEs), with certain exceptions.
 Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.

☆New product



■ High-Luminosity (AlGaNp) Chip LEDs (Taped Models Only)

(If = 20 mA, Ta = 25°C*3)

Outline dimensions (mm)	Resin type		J G	J E S E	Z V J V	Z S J S	Z J J J	Z R J R	Red	Luminous intensity (mcd) TYP.	
	Colored diffusion	Colored transparency									
1.6 × 0.8 (T: 0.35)	●			GM1JE35200AE*1	13	GM1JV35200AE*1	18.8	GM1JS35200AE*1	19	GM1JJ35200AE*1	19
1.6 × 0.8 (T: 0.55)	●			GM1JE55200AE*1	13	GM1JV55200AE*1	16.8	GM1JS55200AE*1	20.9	GM1JJ55200AE*1	19
1.6 × 0.8 (T: 0.8)	●					GM1ZV80300AE	75	GM1ZS80300AE	75	GM1ZJ80300AE	75
	●	☆GM1JG80300AE	15	☆GM1JE80300AE	(15)	LT1JV67A*1	16.5	LT1JS67A*1	14.1		☆LT1JR67A
2.0 × 1.25 (T: 0.8)	●					GM1ZV40300AE	60	GM1ZS40300AE	78	GM1ZJ40300AE	60
	●	☆LT1JG40A	15			GM1JV40300AE	11	GM1JS40300AE	12	GM1JJ40300AE	9.5
3.2 × 2.8 (T: 1.9)	●					GM5ZV96270A	600				GM5ZR96270A
	●					GM5ZV96260AE	320				GM5ZR96260AE
6.0 × 5.0 (T: 2.5)	●					GM5ZV01200A*2	500	GM5ZS01200A*2	700	GM5ZJ01200A*2	500
6.0 × 5.0 (T: 2.3) (board insertion type)	●					GM5SE01200A*2	400			GM5SJ01250AL*2	1 050
2.8 × 1.2 (T: 0.8) (Side emitting)	●					GM5ZV03200Z*2	500	GM5ZS03200Z*2	700	GM5ZJ03200Z*2	500
											☆GM4ZR83200AE (120)

*1 LT1JS67A, LT1JV67A, GM1JV55200AE series, GM1JV35200AE series, GM1JV40300AE series: If = 5 mA

*2 GM5ZR01200A series, GM5ZR03200Z series: If = 60 mA

*3 GM5ZV96260AE series, GM5ZV96270A series, GM5ZV01200A series, GM5ZV03200Z series: Tc = 25°C

■ High-Luminosity (InGaN) Chip LEDs (Taped Models Only)

(If = 10 mA, Ta = 25°C*5)

Outline dimensions (mm)	Resin type				B C	Blue	Luminous intensity (mcd) TYP.	G C	Green	Luminous intensity (mcd) TYP.
	Colored diffusion	Colored transparency	Colorless transparency	Milky diffusion						
1.6 × 0.8 (T: 0.35)			●		GM1BC35370AC*1	23				
1.6 × 0.8 (T: 0.55)			●		GM1BC55255AC*1	23		GM1GC55310AC*4	100	
3.2 × 2.8 (T: 1.9)			●		GM5BC96270A*2	500		GM5GC96270A	1 300	
			●		GM5BC96260AC*2	300		GM5GC96260AC*2	700	
6.0 × 5.0 (T: 2.5)			●		GM5BC01250AC*3	400		GM5GC01250AC*3	1 200	
6.0 × 5.0 (T: 2.3) board insertion type			●		GM5BC03210Z*3	400		GM5GC03210Z*3	1 200	
2.8 × 1.2 (T: 0.8) Side emitting			●		☆GM4BC83211AC*2	(120)				

*1 GM1BC35370AC, GM1BC55255AC: If = 5 mA

*2 GM5BC96260AC series, GM5BC96270A series, GM4BC83211AC: If = 20 mA

*3 GM5BC01250AC series, GM5BC03210Z series: If = 50 mA

*4 GM1GC55310AC: If = 10 mA

*5 GM5BC96260AC series, GM5BC96270A series, GM5BC01250AC series, GM5BC03210Z series: Tc = 25°C

Notice

In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc.

Except where specially indicated, models listed on this page comply with the RoHS Directive*. For details, please contact SHARP.

*RoHS Directive: Prohibits use of lead, cadmium, hexavalent chromium, mercury and specific brominated flame retardants (PBBs and PBDEs), with certain exceptions.

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

■ Chip LEDs (Taped Models Only)

(If = 20 mA¹, Ta = 25°C)

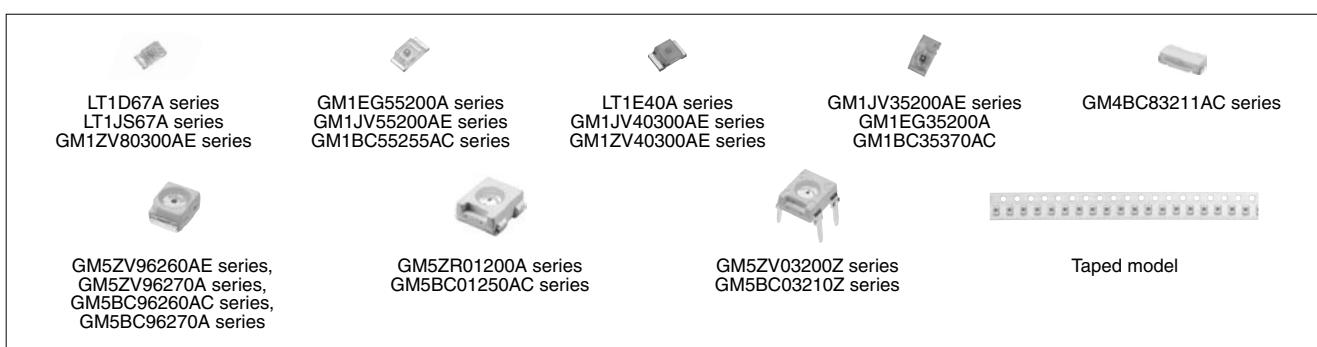
Outline dimensions (mm)	Resin type				K	E F E G	H H Y	
	Colored diffusion	Colored transparency	Colorless transparency	Milky diffusion				
1.6 × 0.8 (T: 0.35)		●				GM1EG35200A	19	
1.6 × 0.8 (T: 0.55)		●				GM1EG55200A	19	GM1HY55200A
1.6 × 0.8 (T: 0.8)		●	LT1K67A ▲	3.8	LT1E67A LT1F67A LT1F67AF	23	LT1H67A	8.3
2.0 × 1.25 (T: 0.8)		●	LT1K40A ▲	5	LT1E40A	19	LT1H40A	10.8

Outline dimensions (mm)	Resin type				S H S	D H D	U U R	P
	Colored diffusion	Colored transparency	Colorless transparency	Milky diffusion				
1.6 × 0.8 (T: 0.55)		●			GM1HS55200A	11.4	GM1HD55200A	12.5
1.6 × 0.8 (T: 0.8)		●	LT1S67A	6.9	LT1D67A	8.8	LT1U67A	29.7
2.0 × 1.25 (T: 0.8)		●	LT1S40A	9.4	LT1D40A	11.9	LT1U40A	35.6

¹ P (Red) series: If = 5 mA

The model marked with ▲ may not be available in the near future. Contact with SHARP for details before use.

HL: High-luminosity

■ High-Luminosity Dichromatic Type Chip LEDs
(Taped Models Only)

(If = 40 mA, Tc = 25°C)

Outline dimensions (mm)	Resin type				BC GC	BC ZR	GC ZR	
	Colored diffusion	Colored transparency	Colorless transparency	Milky diffusion				
6.0 × 5.0 (T: 2.5)		●			GM5BG01210A	300/860	GM5ZRB01210A	300/580
								GM5ZRG01210A
								860/580

Notice

In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc.

Except where specially indicated, models listed on this page comply with the RoHS Directive*. For details, please contact SHARP.

*RoHS Directive: Prohibits use of lead, cadmium, hexavalent chromium, mercury and specific brominated flame retardants (PBBs and PBDEs), with certain exceptions.

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

■ Dichromatic Type Chip LEDs
(Taped Models Only)

(If = 20 mA, Ta = 25°C)

Outline dimensions (mm)	Resin type				E H	Yellow-green + Yellow	ED	Yellow-green + Red	KS	Green + Sunset orange
	Colored diffusion	Colored transparency	Colorless transparency	Milky diffusion						
1.6 × 1.6 (T: 0.8)				●	LT1EH67A	19/8.3	LT1ED67A	19/8.3	LT1KS67A ▲	3.8/6.9

The model marked with ▲ may not be available in the near future. Contact with SHARP for details before use.

■ High-Luminosity White Chip LEDs
(Taped Models Only)

(Ta = 25°C*5)

Outline dimensions (mm)	Color coordinates (x, y)	Radiation color	BW	White	Luminous intensity (mcd) TYP.
1.6 × 0.8 (T: 0.2)	(0.27, 0.23)	White	★GM1BW20300A*1	50	
2.8 × 1.2 (T: 0.8) Side view type	(0.30, 0.29)	White	GM4BW84310A*1	1 550	
			★GM4BW853A0A*1	1 900	
			★GM4BW853B0A*1	2 200	
			GM4BW64310A*1	1 500	
3.85 × 1.0 (T: 0.6) Side view type	(0.30, 0.29)	White	★GM4BW653A0A*1	1 900	
			★GM4BW653B0A*1	2 200	
			GM4BW53340A*1	1 800	
2.64 × 1.64 (T: 0.7)	(0.31, 0.31)	White	★GM1BW78140A*4	(9 000)	
3.2 × 2.8 (T: 1.9)	(0.31, 0.31)	White	★GM5BW96381A*1	(2 250)	
			★GM5BW96380A*1	(2 450)	
3.2 × 2.8 (T: 1.4)	(0.31, 0.31)	White	GM5BW94320A*6	3 800	
			★GM5BW94370A*6	(5 200)	
5.0 × 5.0 (T: 1.5)	(0.31, 0.31)	White	GM5BW05340A*1	10 000	
6.0 × 5.0 (T: 1.5) 6-terminal leadless	(0.31, 0.31)	White	GM5BW01300A*2	4 200	
6.0 × 5.0 (T: 2.5) 4-terminal leadless	(0.31, 0.31)	White	GM5BW01301A*3	1 800	
			GM5BW01311A*3	3 300	

*1 GM1BW20300A, GM4BW84310A series, GM4BW64310A series, GM4BW53340A, GM5BW96380A series, GM5BW05340A: If = 20 mA

*2 GM5BW01300A: If = 35 mA/chip

*3 GM5BW01301A series: If = 40 mA

*4 GM1BW78140A series: If = 150 mA

*5 GM5BW96380A series, GM5BW01300A, GM5BW01301A series: Tc = 25°C

*6 GM5BW94320A, GM5BW94370A: If = 25 mA

Notice

In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc.

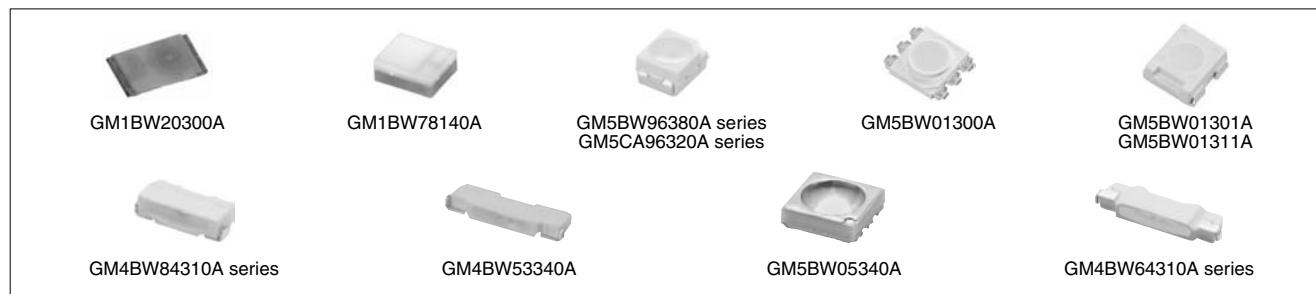
Except where specially indicated, models listed on this page comply with the RoHS Directive*. For details, please contact SHARP.
*RoHS Directive: Prohibits use of lead, cadmium, hexavalent chromium, mercury and specific brominated flame retardants (PBBs and PBDEs), with certain exceptions.

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

■ Pastel Color Chip LEDs
(Taped Models Only)

(If = 20 mA, Tc = 25°C)

Outline dimensions (mm)	CA	CY		CV					
		Color coordinates (x, y)	Luminous intensity (mcd) TYP.		Color coordinates (x, y)	Luminous intensity (mcd) TYP.	Color coordinates (x, y)	Luminous intensity (mcd) TYP.	
3.2 × 2.8 (T: 1.9)	GM5CA96320A	(0.17, 0.20)	1 000	☆GM5CY96320A	(0.42, 0.48)	1 500	☆GM5CV96320A	(0.35, 0.15)	500

■ High-Luminosity Dichromatic Type Chip LEDs (RGB 3-color)
(Taped Models Only)

(Ta = 25°C*9)

Outline dimensions (mm)	Resin type				WA	Red + Green + Blue	Luminous intensity (mcd) TYP.
	Colored diffusion	Colored transparency	Colorless transparency	Milky diffusion			
1.6 × 1.6 (T: 0.55)				●	GM1WA55311A*4		20/70/23
3.2 × 2.8 (T: 1.4)				●	☆GM5WA94300A*6		1 800 [Mixed color]
5.0 × 2.5 (T: 2.5)				●	★GM4WA25300A*7		(2 200) [Mixed color]
6.0 × 5.0 (T: 2.5) 6-terminal leadless		●			GM5WA06256A*5		1 500 [Mixed color]
6.0 × 5.0 (T: 2.4) 6-terminal leadless		●		●	★GM5WA06310A*1		(3 500) [Mixed color]
6.0 × 5.0 (T: 2.3 [resin part]) 6-terminal lead type		●			GM5WA06270A*2, 3		3 000 [Mixed color]
		●			GM5WA06256Z*5		1 500 [Mixed color]

*1 GM5WA06310A: If = 35 mA (Red), If = 40 mA (Green), If = 10 mA (Blue)

*2 GM5WA06270A: If = 35 mA (Red, Green, Blue)

*3 GM5WA06270A: T: 2.4 mm

*4 GM1WA55311A: If = 5 mA (Red, Green, Blue)

*5 GM5WA06256A: If = 22 mA (Red), If = 35 mA (Green), If = 13 mA (Blue)

*6 GM5WA94300A: If = 20 mA (Red), If = 20 mA (Green), If = 7 mA (Blue)

*7 GM4WA25300A: If = 21 mA (Red), If = 25 mA (Green), If = 7 mA (Blue)

*8 GM1WA55311A, GM5WA94300A, GM4WA25300A, GM5WA06256A series: Tc = 25°C



Notice

In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc.

Except where specially indicated, models listed on this page comply with the RoHS Directive*. For details, please contact SHARP.

*RoHS Directive: Prohibits use of lead, cadmium, hexavalent chromium, mercury and specific brominated flame retardants (PBBs and PBDEs), with certain exceptions.

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

☆New product



■ LED Module for Lighting

◆ Features

- (1) Size: 18 mm × 18 mm, 1.5 mm thickness* Square module for light source.
- (2) 1 module (30 LEDs): White type 280 lm (3.6 W)
- (3) Luminous efficiency: White type 78 lm/W
- (4) No interconnection substrate necessary and is directly installable to heat sink.

*Excluding emitting parts



GW5BWC15L02 series

(I_F = 360 mA, T_c = 25°C)

BW			BD			BN					
White			Light bulb color			High color rendering					
	Color coordinates (x, y)	Color temp. (K) TYP.		Color coordinates (x, y)	Color temp. (K) TYP.		Color coordinates (x, y)	Color temp. (K) TYP.			
☆GW5BWC15L02	(0.35, 0.36)	5 000	280	☆GW5BDC15L02	(0.45, 0.41)	2 800	200	☆GW5BNC15L02	(0.35, 0.35)	5 000	190
							☆GW5BNC15L12	(0.31, 0.32)	6 500	190	

Notice

In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc.
 Except where specially indicated, models listed on this page comply with the RoHS Directive*. For details, please contact SHARP.
 *RoHS Directive: Prohibits use of lead, cadmium, hexavalent chromium, mercury and specific brominated flame retardants (PBBs and PBDEs), with certain exceptions.
 Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.

☆New product
★Under development



■ Laser Diodes

◆ Model Configurations

• For applications other than optical discs

Wavelength (nm)	Absolute maximum ratings (mW) ^{*1}	Package	
		ø5.6 mm Metal type	ø3.3 mm Metal type
405 band	25	☆GH04020B2AE	
	25	GH04020A2GE	
	150	☆GH04125A2AE	
	130	GH04P21A2GE	
660 band	10		GH06510F4A
785 band	10	GH07810C2K	
	25	GH07825C2K	

*1 The absolute maximum ratings are not to be exceeded under any conditions whatsoever, whether in testing or actual use.

• For optical disc use^{*3}

Wavelength (nm)	Absolute maximum ratings (mW) ^{*1}	Package		
		ø5.6 mm Metal type	ø3.3 mm Metal type	1.8 mm t Resin type
405 band	20	GH04020A2G	GH04020A4G	
	210 ^{*2}	GH04P21A2G		
	250 ^{*2}	☆GH04P25A2G	☆GH04P25A4G	
660 band	240 ^{*2}	GH06P24A2C		GH16P24A8C
	350 ^{*2}			GH16P35A8C
	400 ^{*2}			☆GH16P40A8C
785 band	240 ^{*2}	GH07P24C1C	GH07P24C4C	
	280 ^{*2}	★GH07P28F1C	★GH07P28F4C	

*1 The absolute maximum ratings are not to be exceeded under any conditions whatsoever, whether in testing or actual use.

*2 Optical power output MAX. (mW)

*3 Models for optical disc use can change considerably, so depending on the time it takes to contact us, there is the possibility that production will have stopped for a specific model. For this reason, we ask for your understanding, as sample sales may be impossible.

Notice

In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc.

Except where specially indicated, models listed on this page comply with the RoHS Directive*. For details, please contact SHARP.

*RoHS Directive: Prohibits use of lead, cadmium, hexavalent chromium, mercury and specific brominated flame retardants (PBBs and PBDEs), with certain exceptions.

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

◆ Specifications

• Laser diodes lineup for applications other than optical discs

(Tc = 25°C)

Model No.	Wave-length (nm)	Absolute maximum ratings* ¹		Features	Applications	Terminal connections
		CW (Continuous wave)				
★GH04020B2AE	405 band	25		ø5.6 mm CAN package, operating temperature: 70°C MAX., with built-in monitor PD	Laser displacement gauge, light sources, etc.	A
★GH04125A2AE		150		ø5.6 mm CAN package, operating temperature: 70°C MAX., with built-in monitor PD	Laser displacement gauge, light sources, etc.	A
GH04020A2GE		25		ø5.6 mm CAN package, operating temperature: 70°C MAX.	Laser displacement gauge, light sources, etc.	E
GH04P21A2GE		130		ø5.6 mm CAN package, operating temperature: 70°C MAX.	Laser displacement gauge, light sources, etc.	E
GH06510F4A	660 band	10		ø3.3 mm CAN package, operating temperature: 70°C MAX., with built-in monitor PD	Bar code reader, laser displacement gauge, etc.	A
GH07810C2K	785 band	10		ø5.6 mm CAN package, operating temperature: 60°C MAX., with built-in monitor PD	Printer, copier, complex machine	D
GH07825C2K		25		ø5.6 mm CAN package, operating temperature: 60°C MAX., with built-in monitor PD	Printer, copier, complex machine	

• Laser diodes lineup for optical disc use*²

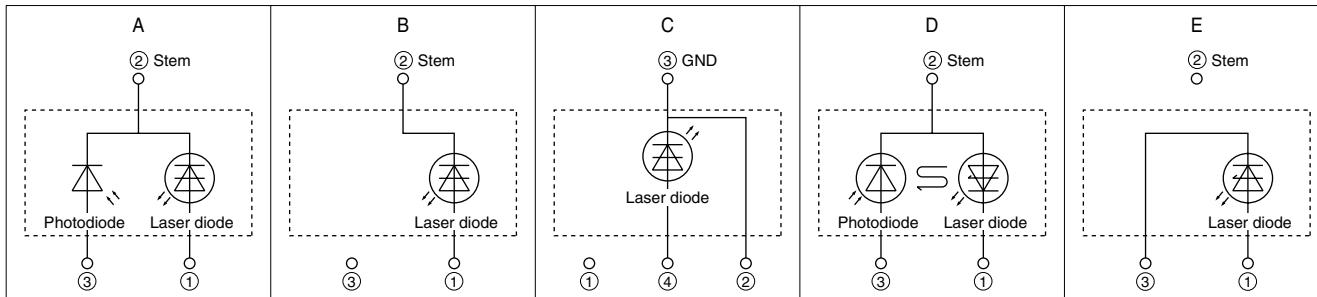
(Tc = 25°C)

Model No.	Wave-length (nm)	Absolute maximum ratings* ¹		Features	Applications	Terminal connections
		CW (Continuous wave)	Pulse			
GH04020A2G	405 band	20	—	ø5.6 mm CAN package, operating temperature: 70°C MAX.	Blu-ray disc playback	E
GH04020A4G		20	—	ø3.3 mm CAN package, operating temperature: 70°C MAX.	Blu-ray disc playback	E
GH04P21A2G		105	210	ø5.6 mm CAN package, operating temperature: 70°C MAX. (pulse drive)	Blu-ray disc recording	E
★GH04P25A2G		125	250	ø5.6 mm CAN package, operating temperature: 80°C MAX. (pulse drive)	Blu-ray disc recording	E
★GH04P25A4G		125	250	ø3.3 mm CAN package, operating temperature: 80°C MAX. (pulse drive)	Blu-ray disc recording	E
GH06P24A2C		100	240	ø5.6 mm CAN package, operating temperature: 75°C MAX. (pulse drive)	Double-layer DVD 4x writing	B
GH16P24A8C	660 band	100	240	1.8 mm frame package, operating temperature: 80°C MAX. (pulse drive)	Double-layer DVD 4x writing	C
GH16P35A8C		125	350	1.8 mm frame package, operating temperature: 80°C MAX. (pulse drive)	Double-layer DVD 8x to 16x recording	
★GH16P40A8C		135	400	1.8 mm frame package, operating temperature: 80°C MAX. (pulse drive)	Double-layer DVD 8x to 16x recording	
GH07P24C1C		120	240	ø5.6 mm CAN package, operating temperature: 75°C MAX. (pulse drive)	CD-R/RW (MAX. 48x to 52x writing)	
★GH07P28F1C	785 band	150	280	ø5.6 mm CAN package, operating temperature: 80°C MAX. (pulse drive)	CD-R/RW (MAX. 48x to 52x writing)	B
GH07P24C4C		120	240	ø3.3 mm CAN package, operating temperature: 75°C MAX. (pulse drive)	CD-R/RW (H/H, slim dual-purpose) (MAX. 48x to 52x writing)	
★GH07P28F4C		150	280	ø3.3 mm CAN package, operating temperature: 80°C MAX. (pulse drive)	CD-R/RW (H/H, slim dual-purpose) (MAX. 48x to 52x writing)	

*1 The absolute maximum ratings are not to be exceeded under any conditions whatsoever, whether in testing or actual use. For recommended optical power output, consult the specification sheet or data sheet for each model.

*2 Models for optical disc use can change considerably, so depending on the time it takes to contact us, there is the possibility that production will have stopped for a specific model. For this reason, we ask for your understanding, as sample sales may be impossible.

• Terminal Connections



Notice

In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc.

Except where specially indicated, models listed on this page comply with the RoHS Directive*. For details, please contact SHARP.

*RoHS Directive: Prohibits use of lead, cadmium, hexavalent chromium, mercury and specific brominated flame retardants (PBBs and PBDEs), with certain exceptions.

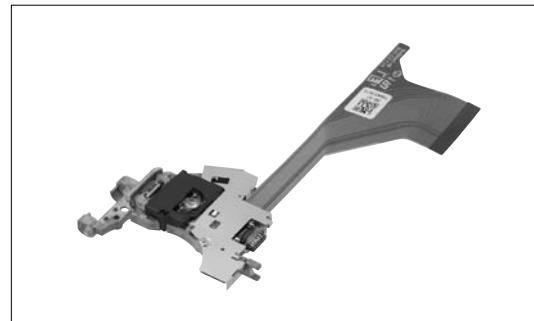
Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.

■ Slim Combo Drive Pickup

<DD-57>

◆ Features

- Thin type pickup compatible with half-inch-height drive (12.7 mm thickness)
- Playback speed: 8x (DVD-ROM), 24x (CD-ROM)
- Recording speed: 24x (CD-R), 24x (CD-RW)
- DVD-RAM readable
- Outline dimensions: W 38.6 × H 7.3 × D 48.7 (mm)
- Weight: Approx. 11 g

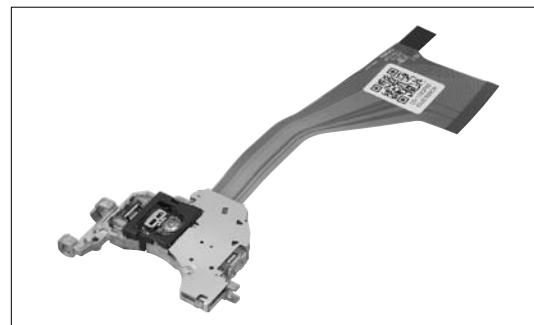


■ Slim DVD Super-Multi Drive Pickup

<DD-115>

◆ Features

- Thin type pickup compatible with half-inch-height drive (12.7 mm thickness)
- Playback speed: 8x (DVD-ROM), 24x (CD-ROM)
- Recording speed: 8x (DVD±R, +RW, ±R/+RW(DL))
6x (DVD-RW, -RW(DL))
5x (DVD-RAM)
24x (CD-R/RW)
- Outline dimensions: W 35.6 × H 7.3 × D 48.7 (mm)
- Weight: Approx. 13.5 g

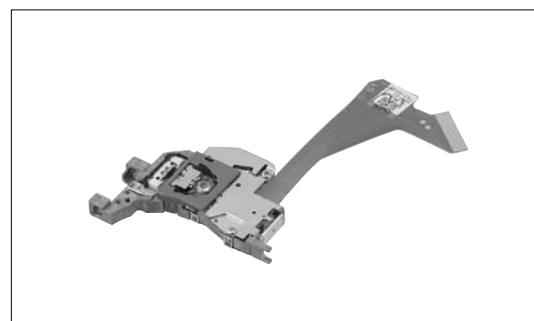


■ DVD Pickup for Automotive Use

<HPD-61>

◆ Features

- Compact, thin (7.3 mm) pickup
- Playable disk: DVD-ROM, CD-ROM
- Operating temperature: -20 to +80°C
- Outline dimensions: W 30.2 × H 7.3 × D 48.7 (mm)
- Weight: Approx. 13.5 g



Notice

In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc. Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.