GL3□□44 series
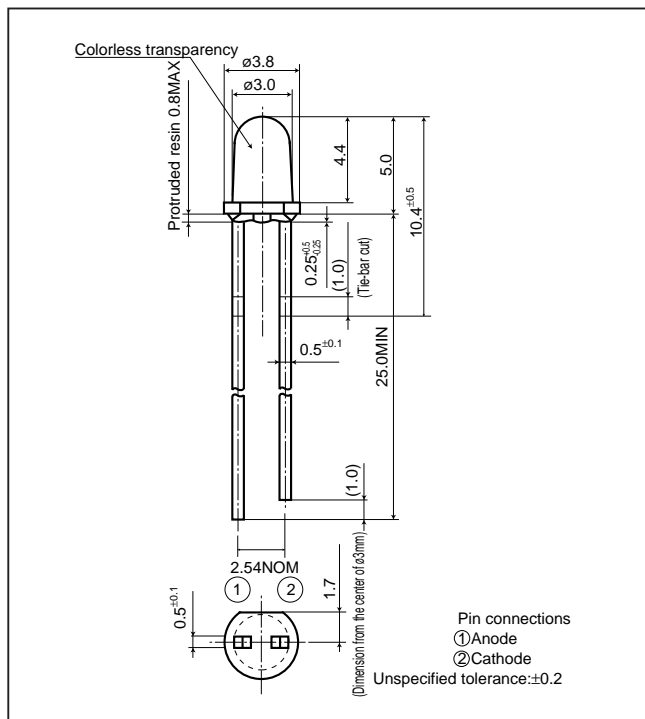
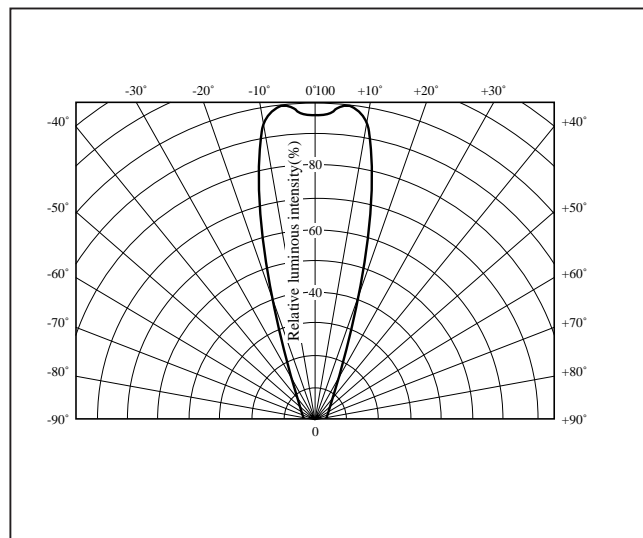## ø3mm(T-1), Cylinder Type, Colorless Transparency LED Lamps for Backlight/Indicator

■ **Outline Dimensions** (Unit : mm)

Colorless transparency
ø3.8
ø3.0
Protruded resin 0.8MAX
4.4
5.0
10.4$^{±0.5}$
0.25$^{+0.5}_{-0.25}$
(1.0) (Tie-bar cut)
0.5$^{±0.1}$
25.0MIN
(1.0)
2.54NOM
① ②
0.5$^{±0.1}$
1.7
(Dimension from the center of ø3mm)

Pin connections
①Anode
②Cathode
Unspecified tolerance:±0.2

■ **Radiation Diagram** (Ta=25˚C)

■ **Absolute Maximum Ratings** (Ta=25˚C)

Model No.	Radiation color	Radiation material	Power dissipation P (mW)	Forward current I_F (mA)	Peak forward current I_{FM}[*1] (mA)	Derating factor (mA/˚C)		Reverse voltage V_R (V)	Operating temperature T_{opr} (˚C)	Storage temperature T_{stg} (˚C)	Soldering temperature T_{sol}[*2] (˚C)
						DC	Pulse				
GL3PR44	Red	GaP	23	10	50	0.13	0.67	5	-25 to +85	-25 to +100	260
GL3HD44	Red	GaAsP on GaP	84	30	50	0.40	0.67	5	-25 to +85	-25 to +100	260
GL3HS44	Sunset orange	GaAsP on GaP	84	30	50	0.40	0.67	5	-25 to +85	-25 to +100	260
GL3HY44	Yellow	GaAsP on GaP	84	30	50	0.40	0.67	5	-25 to +85	-25 to +100	260
GL3EG44	Yellow-green	GaP	84	30	50	0.40	0.67	5	-25 to +85	-25 to +100	260
GL3KG44	Green	GaP	84	30	50	0.40	0.67	5	-25 to +85	-25 to +100	260

*1 Duty ratio=1/10, Pulse width=0.1ms
*2 5s or less(At the position of 1.6mm or more from the bottom face of resin package)

■ **Electro-optical Characteristics** (Ta=25˚C)

Lens type	Model No.	Forward voltage V_F(V)		Peak emission wavelength λ_P(nm) TYP	I_F (mA)	Luminous intensity I_V(mcd) TYP	I_F (mA)	Spectrum radiation bandwidth $\Delta\lambda$(nm) TYP	I_F (mA)	Reverse current I_R(µA) MAX	V_R (V)	Terminal capacitance C_t(pF) TYP	(MHz)	Page for characteristics diagrams
		TYP	MAX											
Colorless transparency	GL3PR44	1.9	2.3	695	5	12	5	100	5	10	4	55	1	→
	GL3HD44	2.0	2.8	635	20	110	20	35	20	10	4	20	1	→
	GL3HS44	2.0	2.8	610	20	100	20	35	20	10	4	15	1	→
	GL3HY44	2.0	2.8	585	20	100	20	30	20	10	4	35	1	→
	GL3EG44	2.1	2.8	565	20	130	20	30	20	10	4	35	1	→
	GL3KG44	2.1	2.8	555	20	60	20	25	20	10	4	40	1	→

LED Lamp Characteristics Diagrams

PR series

Forward Current Derating Curve

Forward current I_F(mA) vs. Ambient temperature T_a(°C)

Forward Current vs. Forward Voltage(Note)
($T_a=25$°C)

Forward current I_F(mA) vs. Forward voltage V_F(V)

Luminous Intensity vs. Ambient Temperature(Note)
($T_a=25$°C)

Relative luminous intensity(%) vs. Ambient temperature T_a(°C)

Peak Forward Current Derating Curve

Peak forward current I_{FM}(mA) vs. Ambient temperature T_a(°C)

Luminous Intensity vs. Forward Current(Note)
($T_a=25$°C)

Relative luminous intensity(%) vs. Forward current I_F(mA)

Duty Ratio vs. Peak Forward Current
($T_a=25$°C)

Peak forward current I_{FM}(mA) vs. Duty ratio D_R

HD series

Forward Current Derating Curve

Forward current I_F(mA) vs. Ambient temperature T_a(°C)

Forward Current vs. Forward Voltage(Note)
($T_a=25$°C)

Forward current I_F(mA) vs. Forward voltage V_F(V)

Luminous Intensity vs. Ambient Temperature(Note)
($T_a=25$°C)

Relative luminous intensity(%) vs. Ambient temperature T_a(°C)

Peak Forward Current Derating Curve

Peak forward current I_{FM}(mA) vs. Ambient temperature T_a(°C)

Luminous Intensity vs. Forward Current(Note)
($T_a=25$°C)

Relative luminous intensity(%) vs. Forward current I_F(mA)

Duty Ratio vs. Peak Forward Current
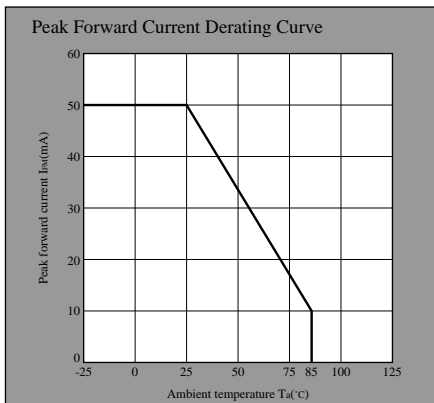($T_a=25$°C)
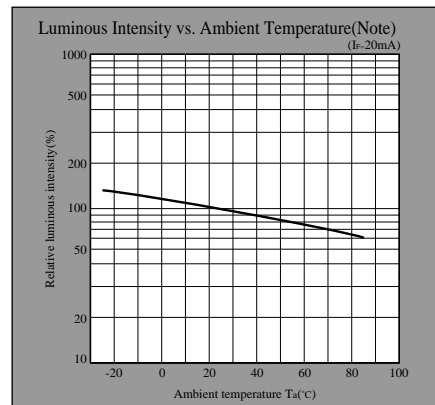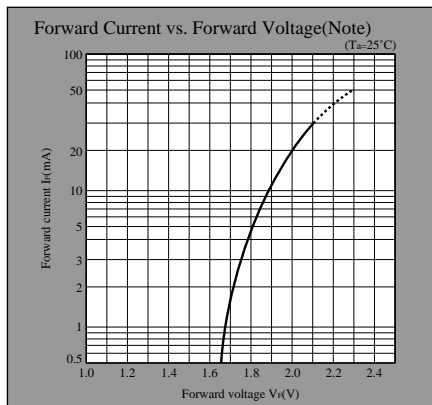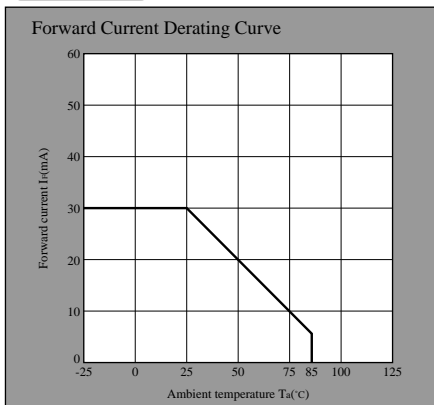
Peak forward current I_{FM}(mA) vs. Duty ratio D_R

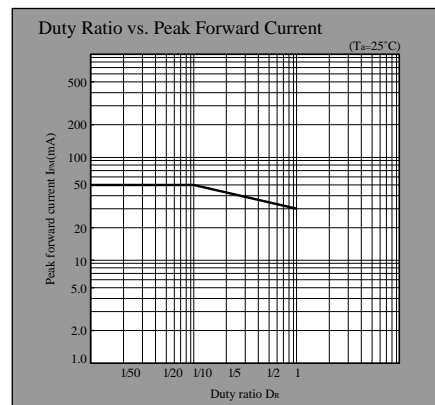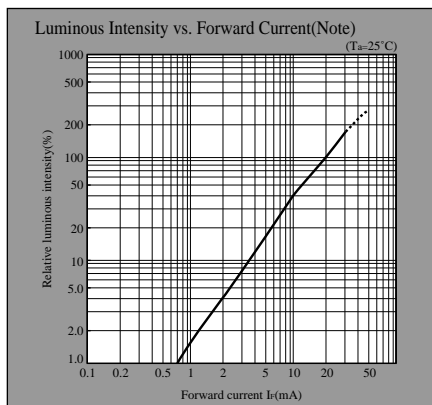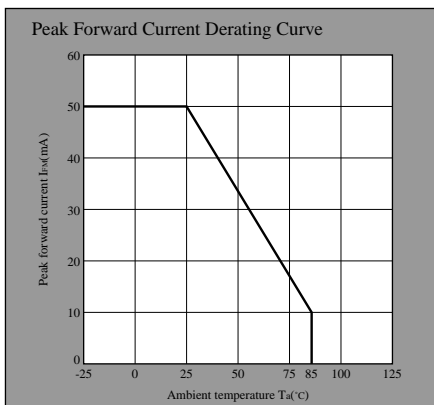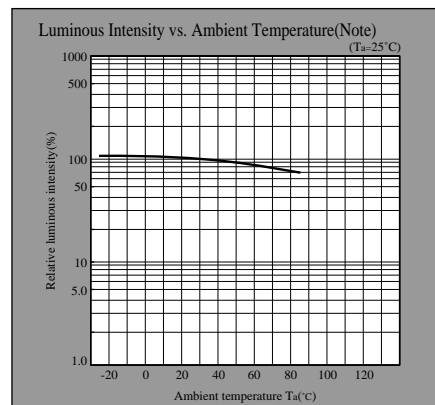Note)Characteristics shown in diagrams are typical values. (not assurance value)

LED Lamp Characteristics Diagrams

Forward Current Derating Curve

Forward current I$_F$(mA) — Ambient temperature T$_a$(°C)

Forward Current vs. Forward Voltage(Note)
(Ta=25°C)

Forward current I$_F$(mA) — Forward voltage V$_F$(V)

Luminous Intensity vs. Ambient Temperature(Note)
(I$_F$=20mA)

Relative luminous intensity(%) — Ambient temperature T$_a$(°C)

Peak Forward Current Derating Curve

Peak forward current I$_{FM}$(mA) — Ambient temperature T$_a$(°C)

Luminous Intensity vs. Forward Current(Note)
(Ta=25°C)

Relative luminous intensity(%) — Forward current I$_F$(mA)

Duty Ratio vs. Peak Forward Current
(Ta=25°C)

Peak forward current I$_F$(mA) — Duty ratio D$_R$

Forward Current Derating Curve

Forward current I$_F$(mA) — Ambient temperature T$_a$(°C)

Forward Current vs. Forward Voltage(Note)
(Ta=25°C)

Forward current I$_F$(mA) — Forward voltage V$_F$(V)

Luminous Intensity vs. Ambient Temperature(Note)
(Ta=25°C)

Relative luminous intensity(%) — Ambient temperature T$_a$(°C)

Peak Forward Current Derating Curve

Peak forward current I$_{FM}$(mA) — Ambient temperature T$_a$(°C)

Luminous Intensity vs. Forward Current(Note)
(Ta=25°C)

Relative luminous intensity(%) — Forward current I$_F$(mA)

Duty Ratio vs. Peak Forward Current
(Ta=25°C)

Peak forward current I$_{FM}$(mA) — Duty ratio D$_R$

Note)Characteristics shown in diagrams are typical values. (not assurance value)

(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.

(Internet) ● Data for sharp's optoelectronic/power device is provided for internet.(Address http://www.sharp.co.jp/ecg/)
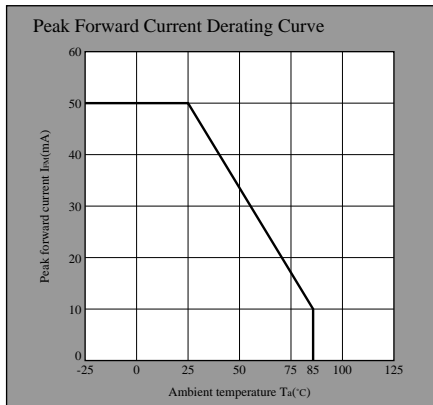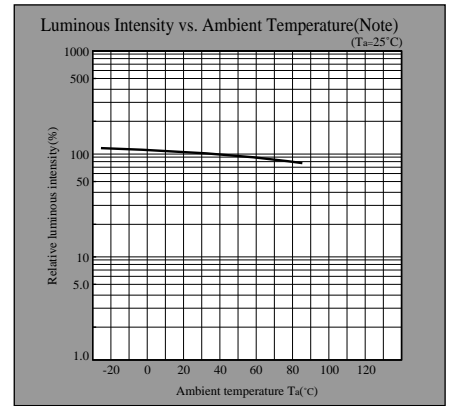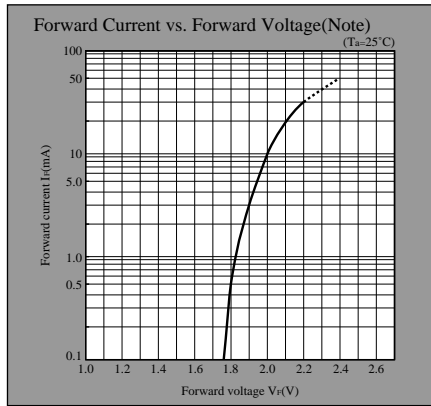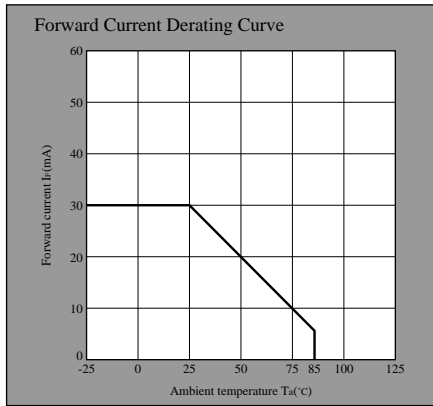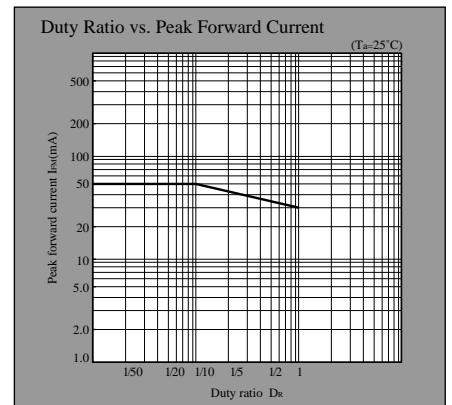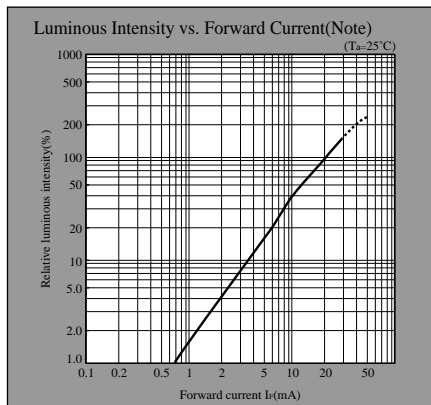
LED Lamp Characteristics Diagrams

EG series

Forward Current Derating Curve

Forward current I$_F$(mA) vs. Ambient temperature T$_a$(°C)

Forward Current vs. Forward Voltage(Note)
(T$_a$=25°C)

Forward current I$_F$(mA) vs. Forward voltage V$_F$(V)

Luminous Intensity vs. Ambient Temperature(Note)
(T$_a$=25°C)

Relative luminous intensity(%) vs. Ambient temperature T$_a$(°C)

Peak Forward Current Derating Curve

Peak forward current I$_{FM}$(mA) vs. Ambient temperature T$_a$(°C)

Luminous Intensity vs. Forward Current(Note)
(T$_a$=25°C)

Relative luminous intensity(%) vs. Forward current I$_F$(mA)

Duty Ratio vs. Peak Forward Current
(T$_a$=25°C)

Peak forward current I$_{FM}$(mA) vs. Duty ratio D$_R$

KG series

Forward Current Derating Curve

Forward current I$_F$(mA) vs. Ambient temperature T$_a$(°C)

Forward Current vs. Forward Voltage(Note)
(T$_a$=25°C)

Forward current I$_F$(mA) vs. Forward voltage V$_F$(V)

Luminous Intensity vs. Ambient Temperature(Note)
(T$_a$=25°C)

Relative luminous intensity(%) vs. Ambient temperature T$_a$(°C)

Peak Forward Current Derating Curve

Peak forward current I$_{FM}$(mA) vs. Ambient temperature T$_a$(°C)

Luminous Intensity vs. Forward Current(Note)
(T$_a$=25°C)

Relative luminous intensity(%) vs. Forward current I$_F$(mA)

Duty Ratio vs. Peak Forward Current
(T$_a$=25°C)

Peak forward current I$_{FM}$(mA) vs. Duty ratio D$_R$

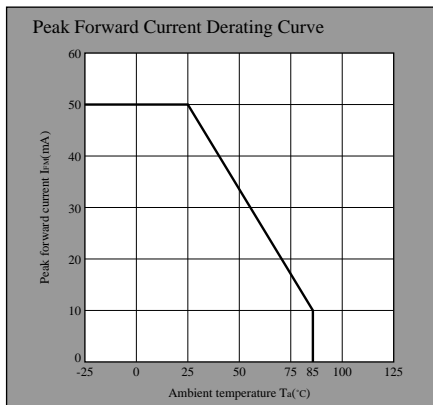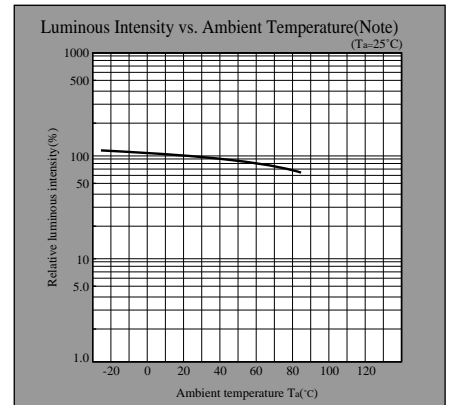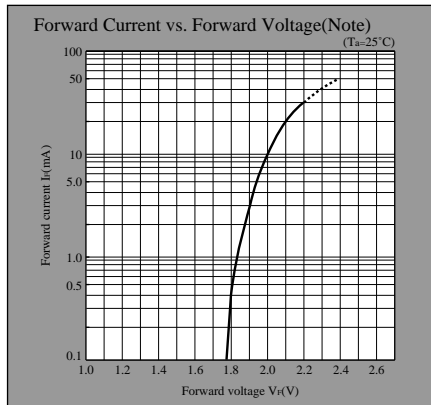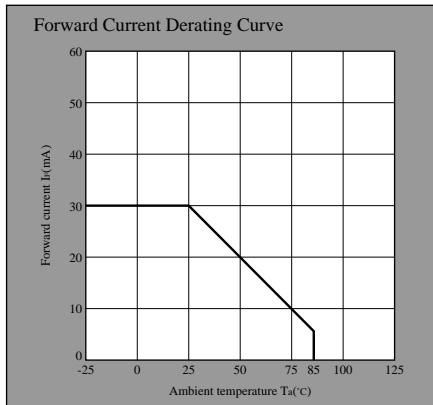Note)Characteristics shown in diagrams are typical values. (not assurance value)