■ HI-SUPER BRIGHT LED

3803X / 3863X Series

ø3mm Round Shape Type

■ Absolute Maximum Ratings

Ta = 25°C

		Blue	Blue Green	Green	Yellow		Orange		Red		Unit
		DB	DC	DG	EFY	FY	EFA	FA	EFR	FR	
Power Dissipation	Pb	100	100	100	125	125	125	125	125	125	mW
Forward Current	I_F	25	25	25	50	50	50	50	50	50	mA
Peak Forward Current	I_{FM}	60	60	60	200	200	200	200	200	200	mA
Reverse Voltage	V_R	5	5	5	5	5	5	5	5	5	V
Operating Temp.	Topr	-40~+85	-40~+85	-40~+85	-40~+85	-40~+85	-40~+85	-40~+85	-40~+85	-40~+85	°C
Storage Temp.	Tstg	-40~+100	-40~+100	-40~+100	-40~+100	-40~+100	-40~+100	-40~+100	-40~+100	-40~+100	°C
Derating *	ΔI_F	0.33	0.33	0.33	0.67	0.67	0.67	0.67	0.67	0.67	mA/°C

* The current derating for operation applies when temperature is above 25°C.
• I_{FM} Condition : tw ≦ 1msec, Duty ≦ 1/20

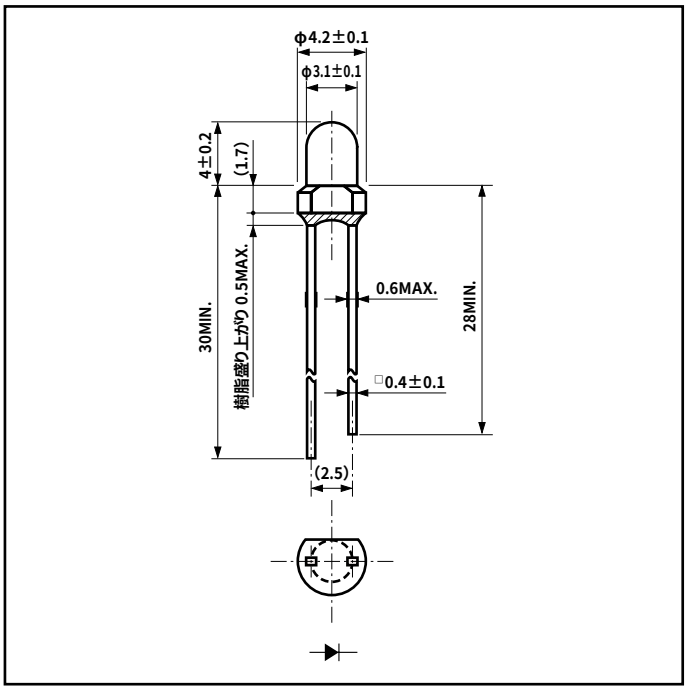
■ Electro-Optical Characteristics

Ta = 25°C

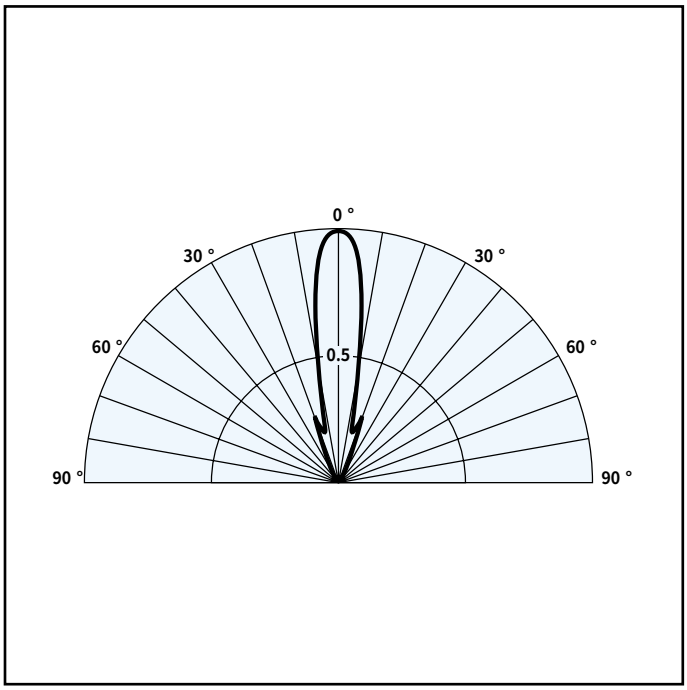
Part No.	Chip		Lens		Luminous Intensity I_V			Wavelength λd	$\Delta\lambda$		Forward Voltage V_F			Reverse Current I_R		Capacitance
	Material	Emitted Color			MIN	TYP	I_F	TYP	TYP	I_F	TYP	MAX	I_F	MAX	V_R	Co
DB3803X	InGaN/SiC	Blue	Water clear	Clear	250	500	20	470	26	20	2.5	4.0	20	100	5	40
DC3803X	InGaN/SiC	Blue Green	Water clear		600	1,200	20	505	30	20	2.5	4.0	20	100	5	40
DG3803X	InGaN/SiC	Green	Water Clear		600	1,200	20	525	30	20	2.5	4.0	20	100	5	40
EFY3863X	AlGaInP	Yellow	Pastel Yellow		1,000	1,440	20	590	15	20	1.9	2.4	20	100	5	40
FY3863X					360	720	20									
EFA3863X	AlGaInP	Orange	Pastel Orange		1,120	1,600	20	605	15	20	1.9	2.4	20	100	5	40
FA3863X					400	800	20									
EFR3863X	AlGaInP	Red	Pastel Red		900	1,280	20	626	15	20	1.9	2.4	20	100	5	40
FR3863X					320	640	20									
Units					mcd	mcd	mA	nm	nm	mA	V	V	mA	μA	V	pF

■ Package Dimensions

Unit : mm



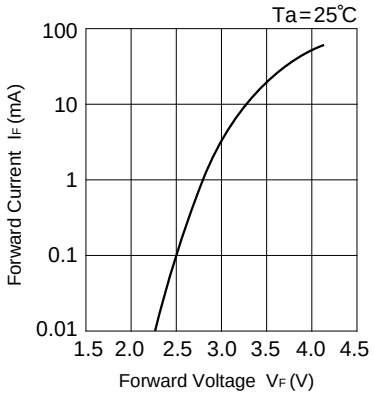
■ Spatial Distribution



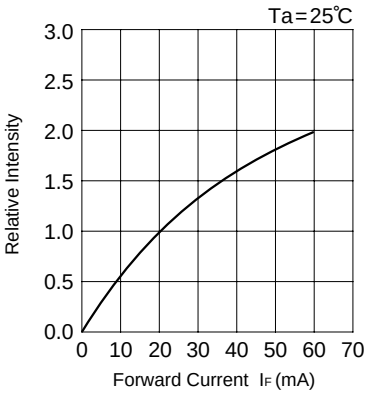
■ HI-SUPER BRIGHT LED

DB 3803X

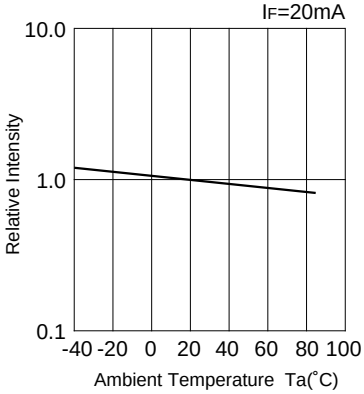
■ Forward Voltage vs. Forward Current



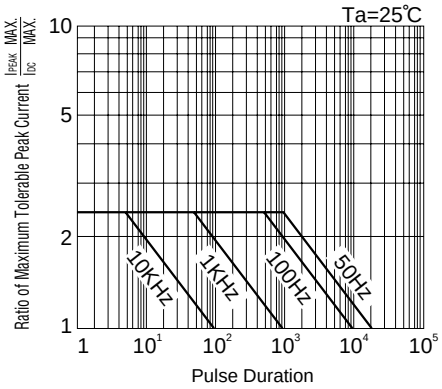
■ Forward Current vs. Relative Intensity



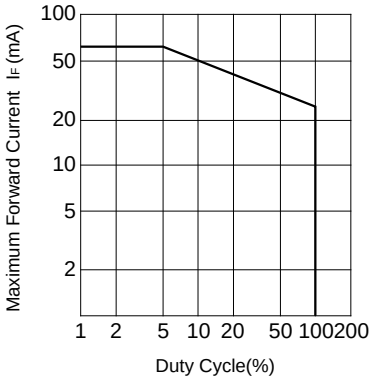
■ Ambient Temperature vs. Intensity



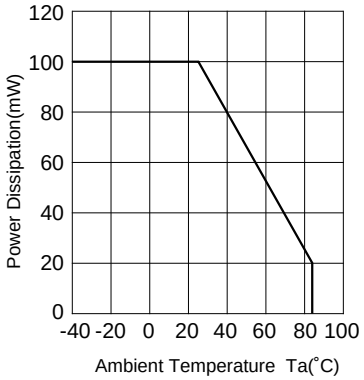
■ Pulse Duration vs.Maximum Tolerable Peak Current



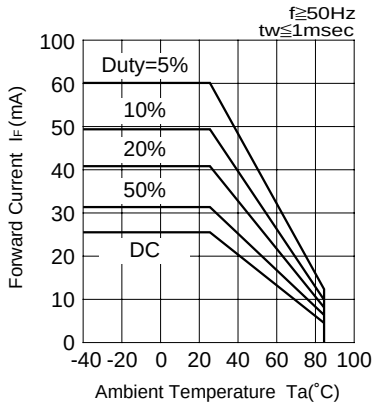
■ Duty Cycle vs. Maximum Forward Current



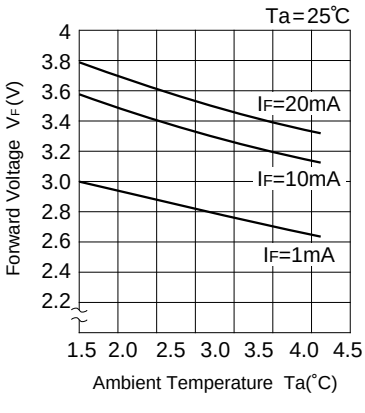
■ Power Dissipation vs. Ambient Temperature



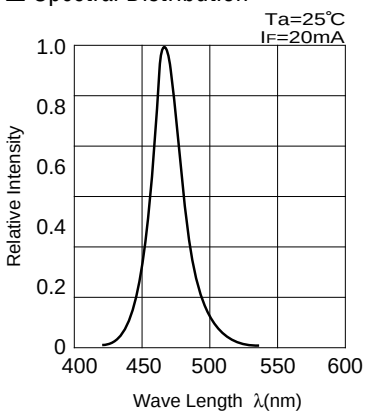
■ Ambient Temperature vs. Maximum Forward Current



■ Forward Voltage vs. Ambient Temperature



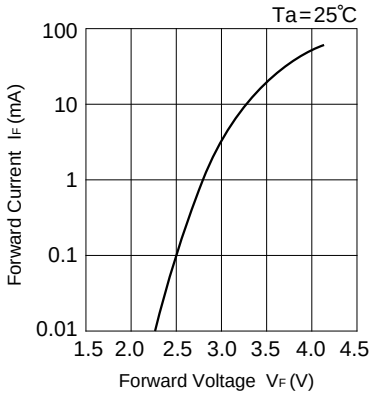
■ Spectral Distribution



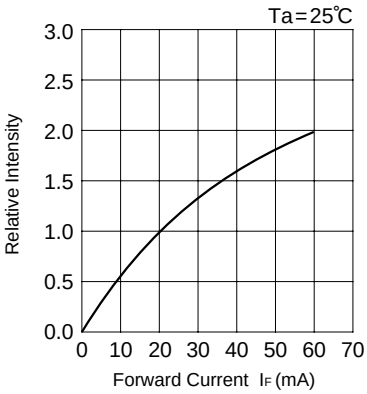
■ HI-SUPER BRIGHT LED

DC 3803X

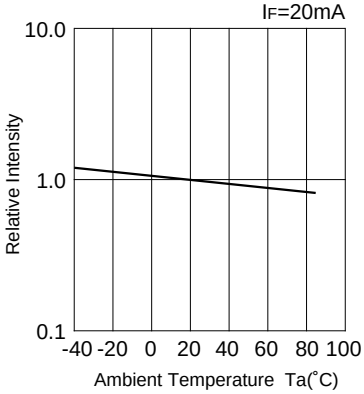
■ Forward Voltage vs. Forward Current



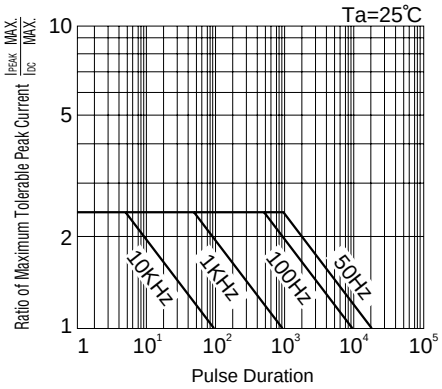
■ Forward Current vs. Relative Intensity



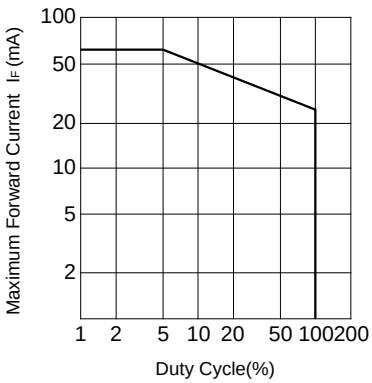
■ Ambient Temperature vs. Intensity



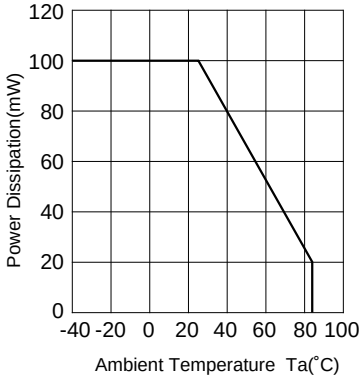
■ Pulse Duration vs.Maximum Tolerable Peak Current



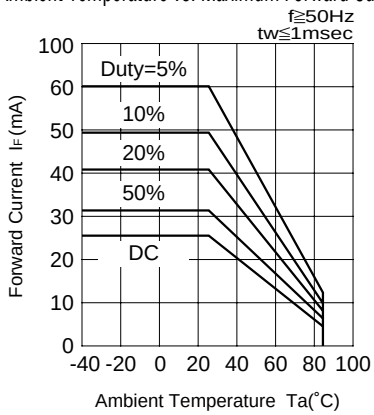
■ Duty Cycle vs. Maximum Forward Current



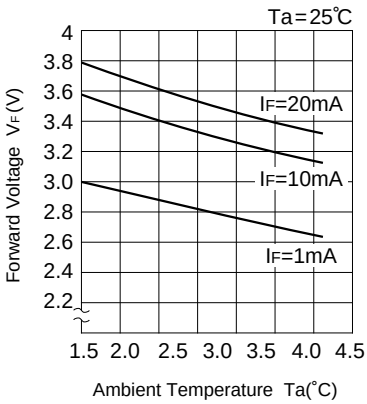
■ Power Dissipation vs. Ambient Temperature



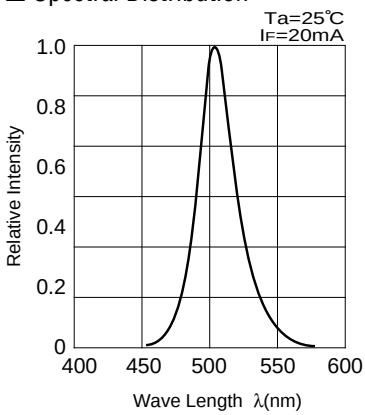
■ Ambient Temperature vs. Maximum Forward Current



■ Forward Voltage vs. Ambient Temperature



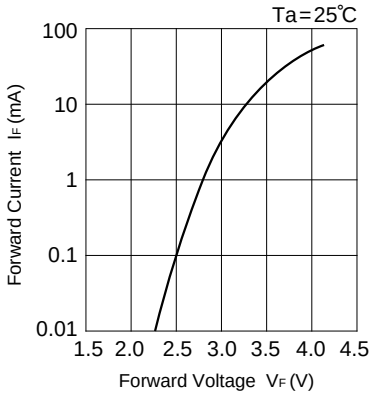
■ Spectral Distribution



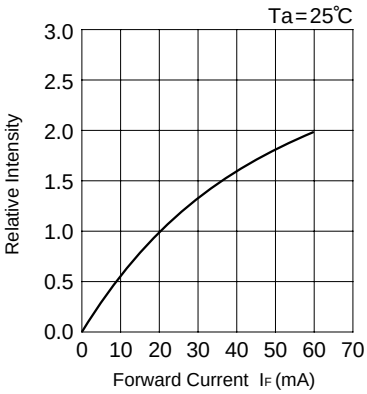
■ HI-SUPER BRIGHT LED

DG 3803X

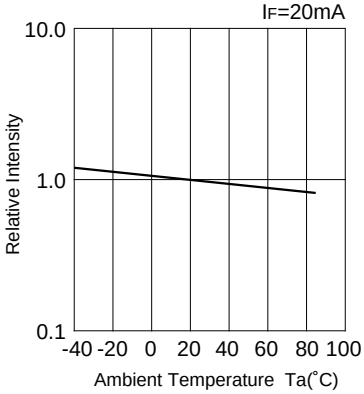
■ Forward Voltage vs. Forward Current



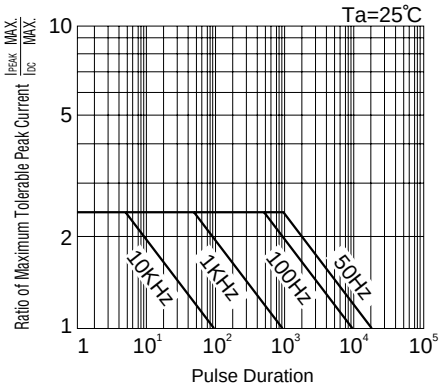
■ Forward Current vs. Relative Intensity



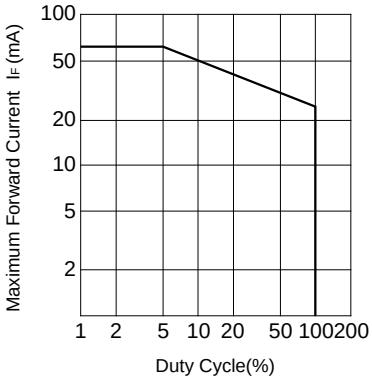
■ Ambient Temperature vs. Intensity



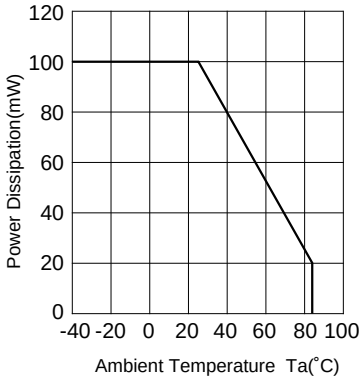
■ Pulse Duration vs.Maximum Tolerable Peak Current



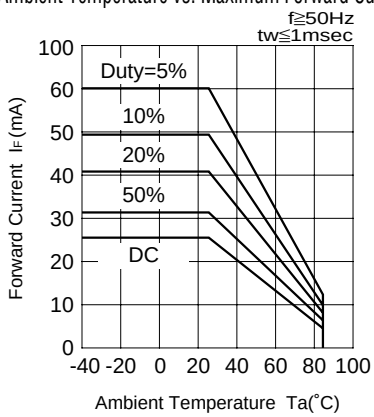
■ Duty Cycle vs. Maximum Forward Current



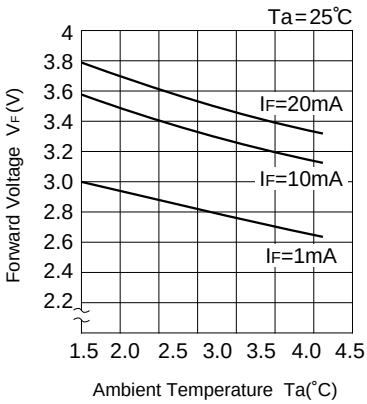
■ Power Dissipation vs. Ambient Temperature



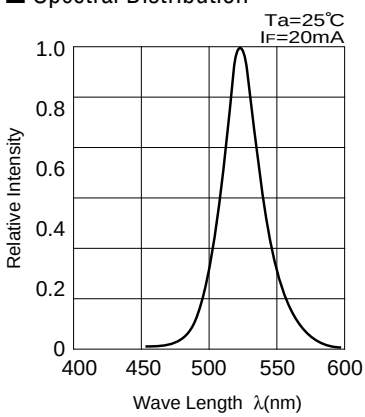
■ Ambient Temperature vs. Maximum Forward Current



■ Forward Voltage vs. Ambient Temperature



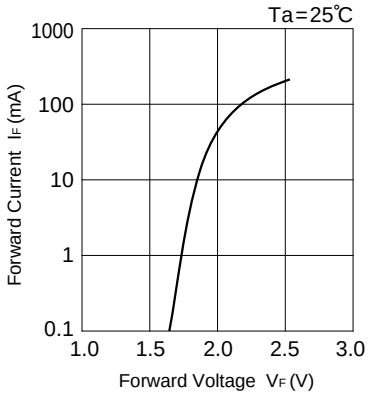
■ Spectral Distribution



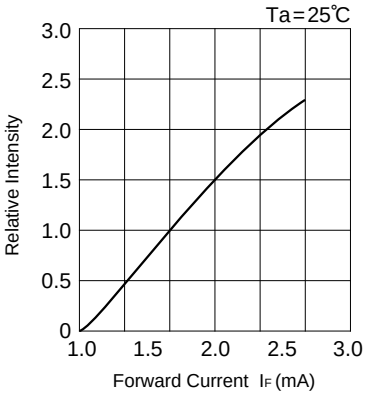
■ HI-SUPER BRIGHT LED

EFY / FY 3863X

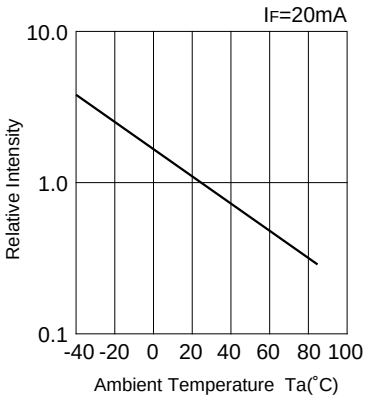
■ Forward Voltage vs. Forward Current



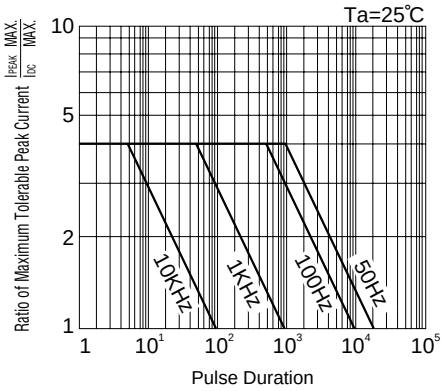
■ Forward Current vs. Relative Intensity



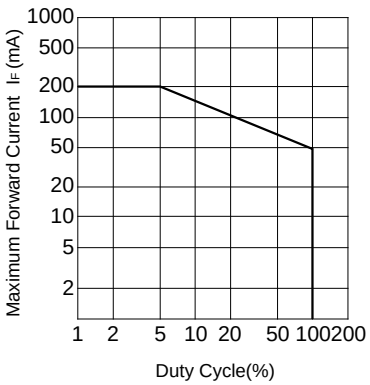
■ Ambient Temperature vs. Intensity



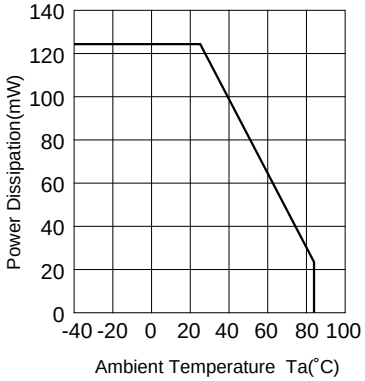
■ Pulse Duration vs.Maximum Tolerable Peak Current



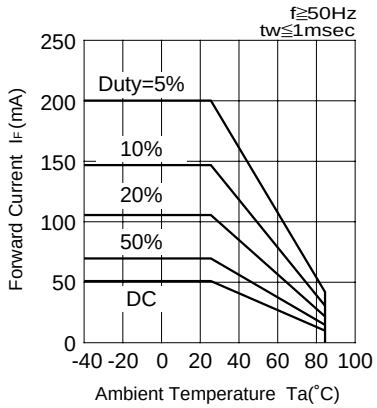
■ Duty Cycle vs. Maximum Forward Current



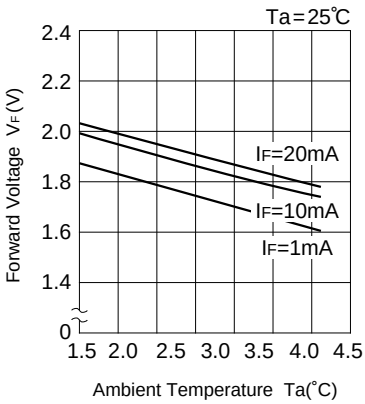
■ Power Dissipation vs. Ambient Temperature



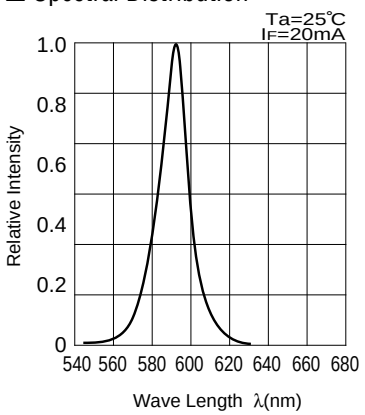
■ Ambient Temperature vs. Maximum Forward Current



■ Forward Voltage vs. Ambient Temperature



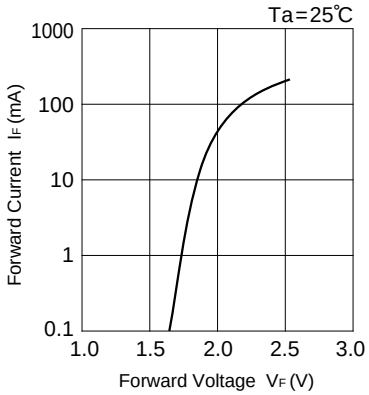
■ Spectral Distribution



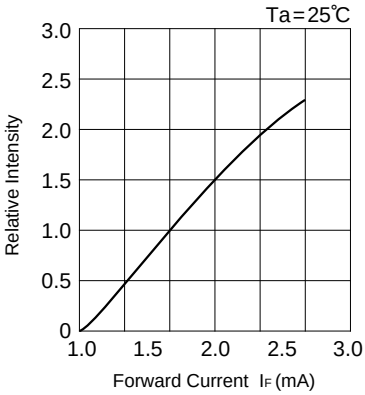
■ HI-SUPER BRIGHT LED

EFA / FA 3863X

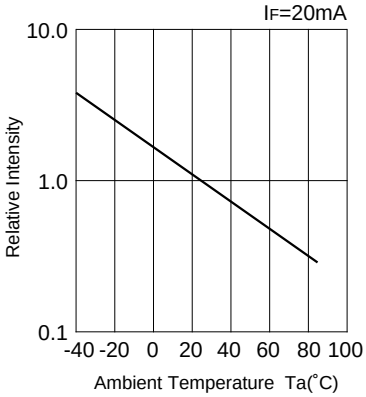
■ Forward Voltage vs. Forward Current



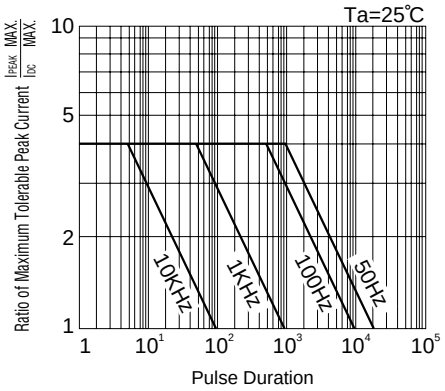
■ Forward Current vs. Relative Intensity



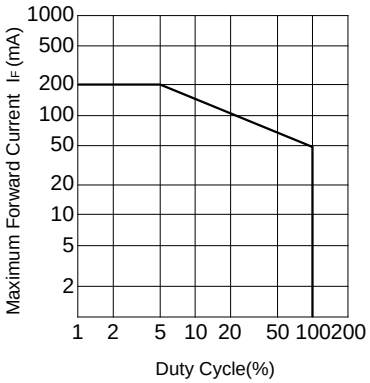
■ Ambient Temperature vs. Intensity



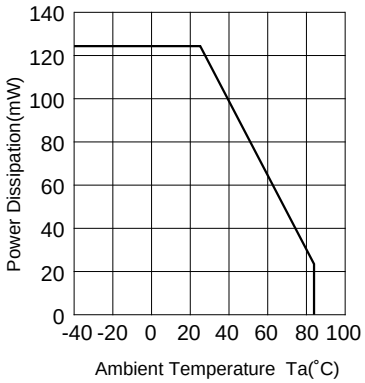
■ Pulse Duration vs.Maximum Tolerable Peak Current



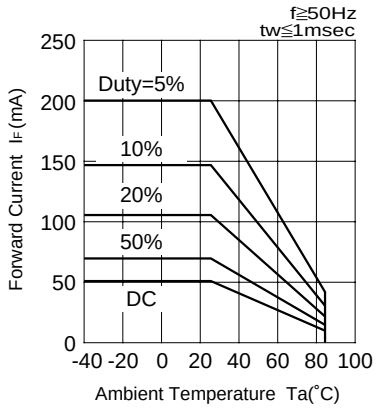
■ Duty Cycle vs. Maximum Forward Current



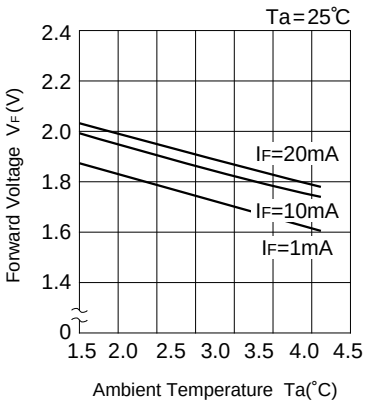
■ Power Dissipation vs. Ambient Temperature



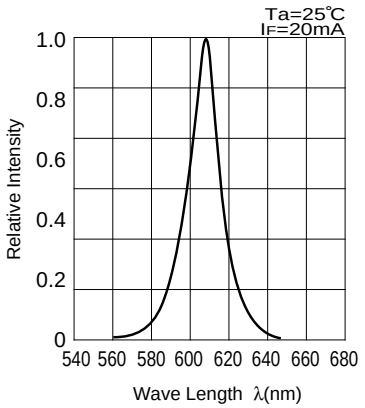
■ Ambient Temperature vs. Maximum Forward Current



■ Forward Voltage vs. Ambient Temperature



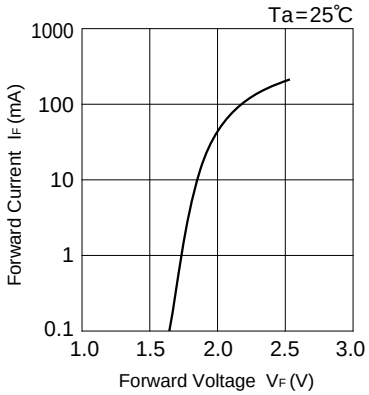
■ Spectral Distribution



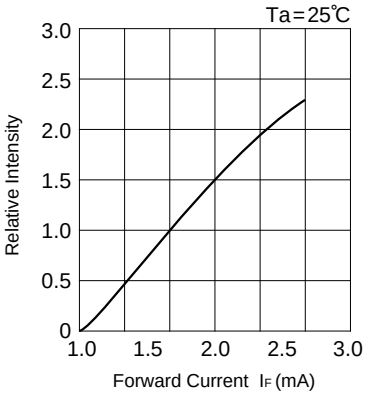
■ HI-SUPER BRIGHT LED

EFR / FR 3863X

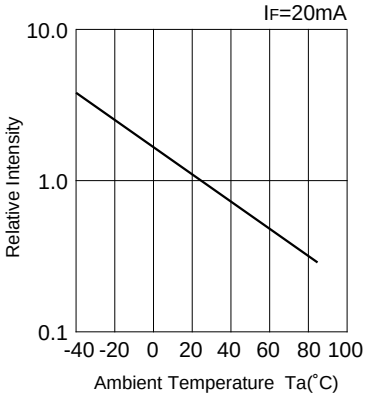
■ Forward Voltage vs. Forward Current



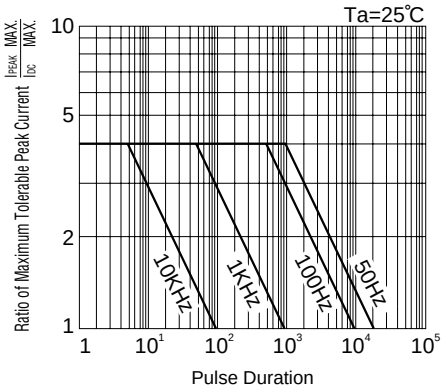
■ Forward Current vs. Relative Intensity



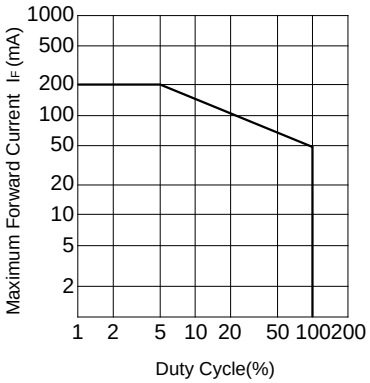
■ Ambient Temperature vs. Intensity



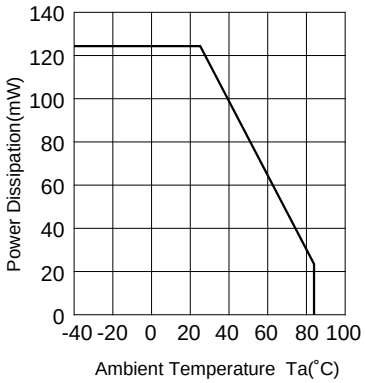
■ Pulse Duration vs.Maximum Tolerable Peak Current



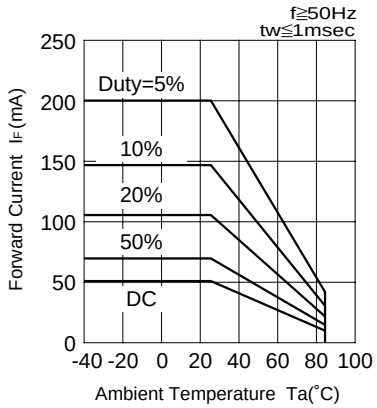
■ Duty Cycle vs. Maximum Forward Current



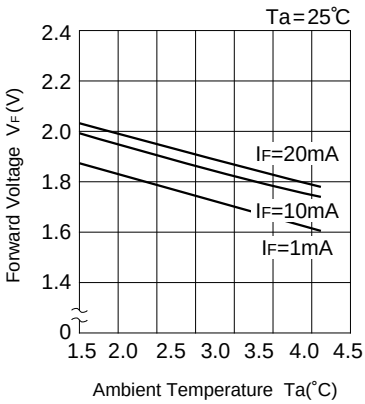
■ Power Dissipation vs. Ambient Temperature



■ Ambient Temperature vs. Maximum Forward Current



■ Forward Voltage vs. Ambient Temperature



■ Spectral Distribution