



■ Absolute Maximum Ratings

Ta = 25°C

		Red	Green	Orange	Unit
		NSR	NSG	NSA	
Power Dissipation	Pb	60	63	63	mW
Forward Current	IF	30	25	25	mA
Peak Forward Current	IFM	120	100	100	mA
Reverse Voltage	VR	4	4	4	V
Operating Temp.	Topr	-40~+85	-40~+85	-40~+85	°C
Storage Temp.	Tstg	-40~+85	-40~+85	-40~+85	°C
Derating *	ΔIF	0.41	0.34	0.34	mA/°C

* The current derating for operation applies when temperature is above 25°C.

• IFM Condition : tw ≤ 1msec, Duty ≤ 1/20

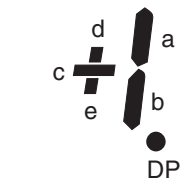
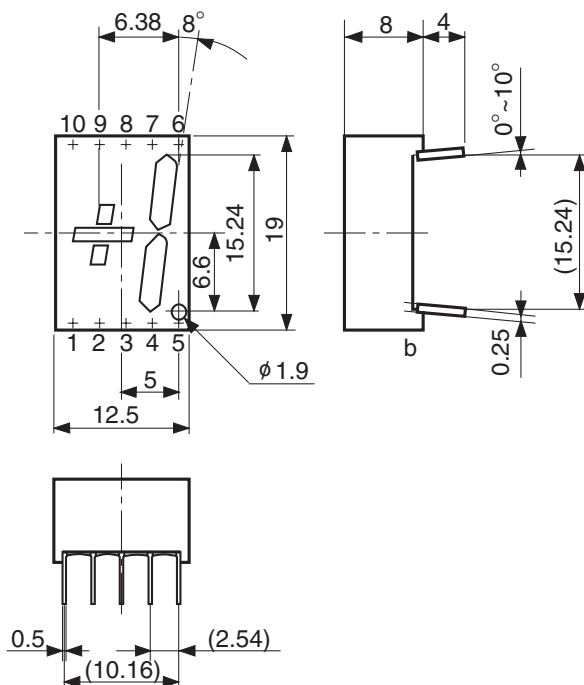
■ Electro-Optical Characteristics

Ta = 25°C

Part No.		Case Color	Chip		Luminous Intensity I _v					Wavelength λ _p		Forward Voltage V _F			Reverse Current I _R	
Anode Common	Cathode Common				Rank B		Rank C			I _F	TYP	I _F	TYP	MAX	I _F	MAX
			Material	Emitted Color	MIN	TYP	MIN	TYP								
NSR161		Black	GaAlAs	Red	6	12	12	15	20	660	20	1.7	2.0	20	100	4
NSR163		Gray														
NSG161P		Black	GaP	Green	2	4	—	—	20	565	20	2.2	2.5	20	100	4
NSG163P		Gray														
NSA161		Black	GaAsP	Orange	4	8	—	—	20	605	20	2.2	2.5	20	100	4
NSA163		Gray														
Units					mcd	mcd	mcd	mcd	mA	nm	mA	V	V	mA	μA	V

■ Package Dimensions

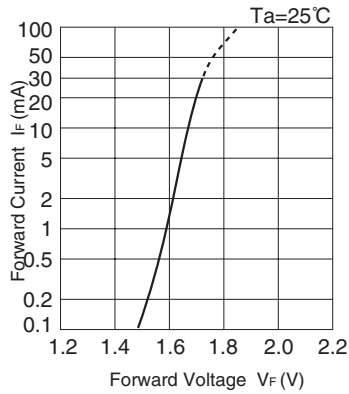
Unit : mm



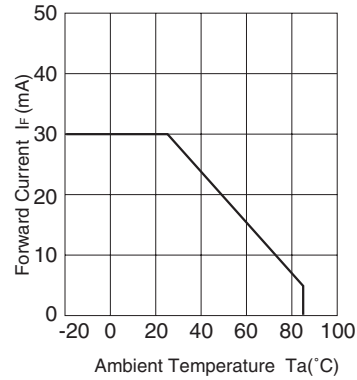
1. Cathode d, e
2. Anode e
3. Anode b
4. Anode DP
5. Cathode DP
6. Anode a
7. Cathode a
8. Anode d
9. Cathode c
10. Anode c

Tolerance : ± 0.25mm

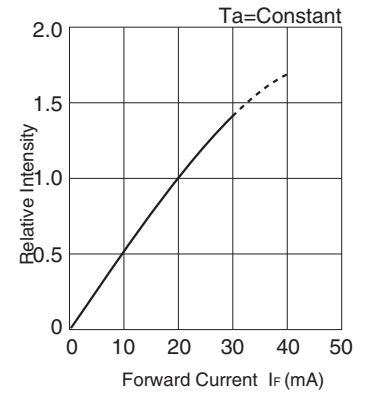
■ Forward Voltage vs. Forward Current



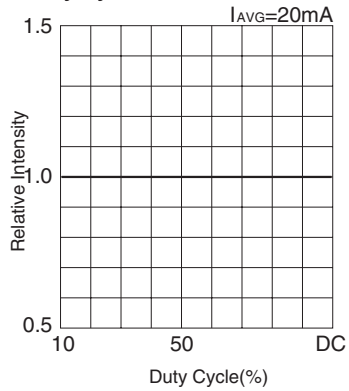
■ Ambient Temperature vs. Maximum Forward Current



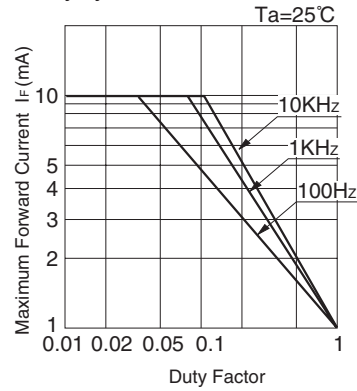
■ Forward Current vs. Relative Intensity



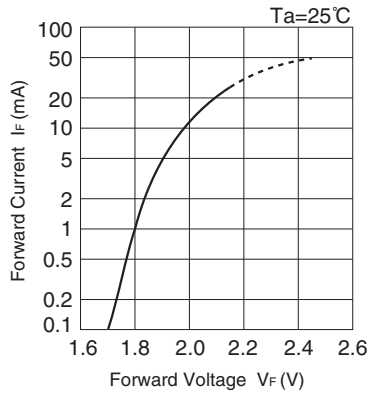
■ Duty Cycle vs. Relative Intensity



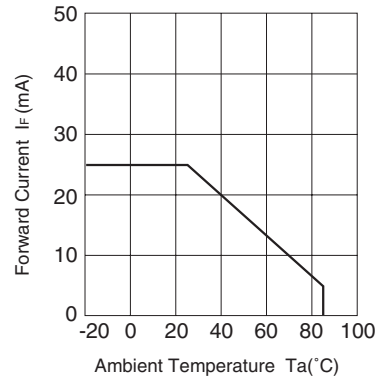
■ Duty Cycle vs. Maximum Forward Current



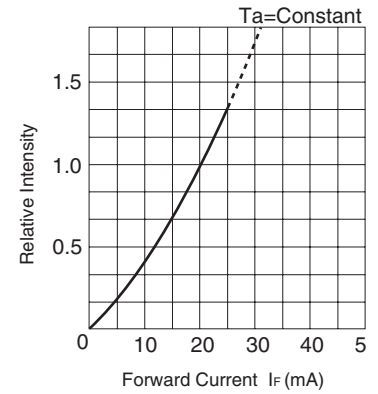
■ Forward Voltage vs. Forward Current



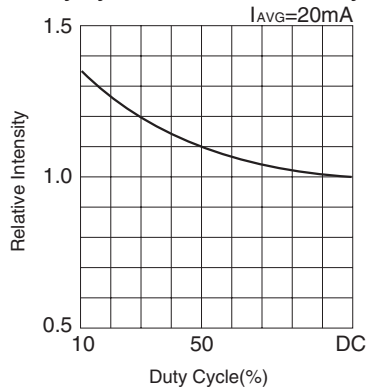
■ Ambient Temperature vs. Maximum Forward Current



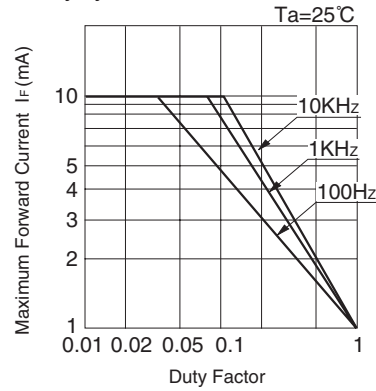
■ Forward Current vs. Relative Intensity



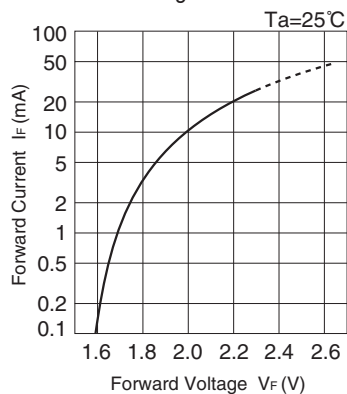
■ Duty Cycle vs. Relative Intensity



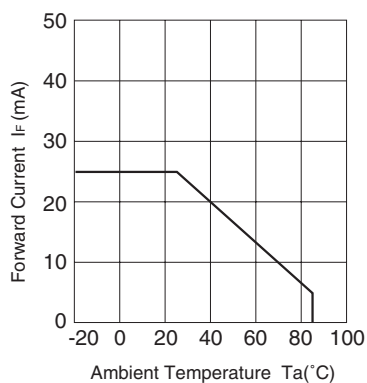
■ Duty Cycle vs. Maximum Forward Current



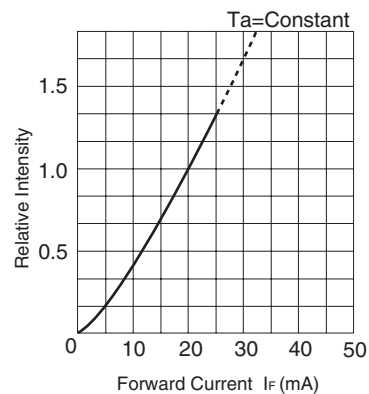
■ Forward Voltage vs. Forward Current



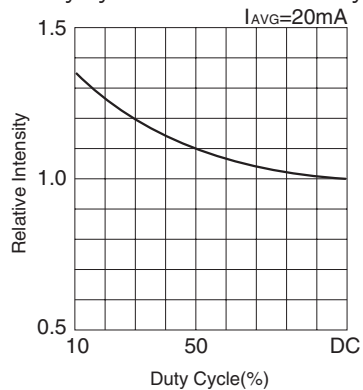
■ Ambient Temperature vs. Maximum Forward Current



■ Forward Current vs. Relative Intensity



■ Duty Cycle vs. Relative Intensity



■ Duty Cycle vs. Maximum Forward Current

