

4361L1/5

Red/Green Bi-Color



Features

Package	Bi-color $\phi 3$ Round shape type, Milky White Diffused epoxy
Product features	<ul style="list-style-type: none"> • Outer Dimension $\phi 3$ Round shape type • Operation temperature range. Storage Temperature : $-30^{\circ}\text{C} \sim 100^{\circ}\text{C}$ Operating Temperature : $-30^{\circ}\text{C} \sim 85^{\circ}\text{C}$ • Lead-free soldering compatible • RoHS compliant
Dominant wavelength	Green : 567nm (PG) Red : 624nm (VR)
Half Intensity Angle	PG : 68 deg. VR : 59 deg.
Die materials	PG : GaP VR : GaAsP
Rank grouping parameter	Sorted by luminous intensity per rank taping
Soldering methods	TTW (Through The Wave) soldering and manual soldering
ESD	More than 2kV(HBM)
Packing	Bulk : 200pcs(MIN.)

Color and Luminous Intensity

(Ta=25°C)

Part No.	Die Name	Material	Emitted Color	Lens Color		Dominant Wavelength		Luminous Intensity		
						λ_d (nm)		I_v (mcd)		
						TYP.	I_F	MIN.	TYP.	I_F
4361L1/5	PG	GaP	Green	Milky White	Diffused	567	20	6	12	20
	VR	GaAsP	Red			624	20	4	8	20

Absolute Maximum Ratings

(Ta=25°C)

Item	Symbol	Absolute Maximum Ratings		Unit
		PG	VR	
Power Dissipation	P_d	75	75	mW
Forward Current	I_F	30	30	mA
Pulse Forward Current ※1	I_{FRM}	100	100	mA
Derating (Ta=25°C or higher)	ΔI_F	0.33	0.33	mA/°C
Reverse Voltage	V_R	4	4	V
Operating Temperature	T_{opr}	-30~+85		°C
Storage Temperature	T_{stg}	-30~+100		°C

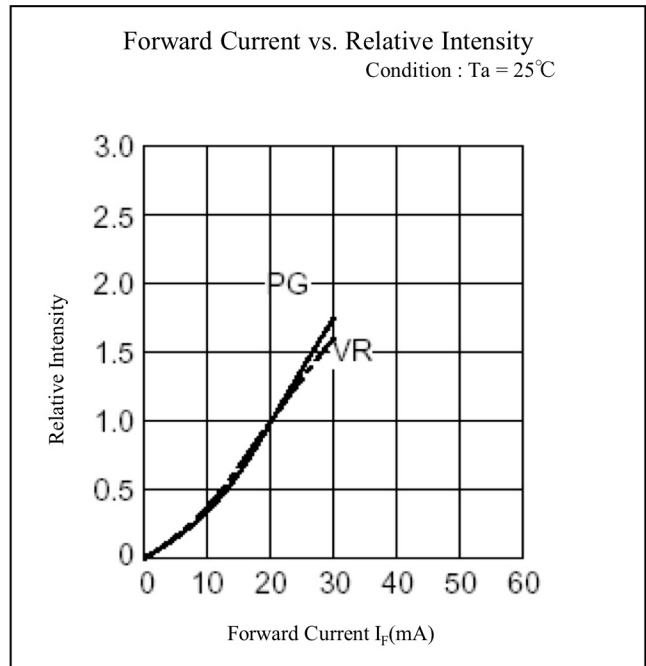
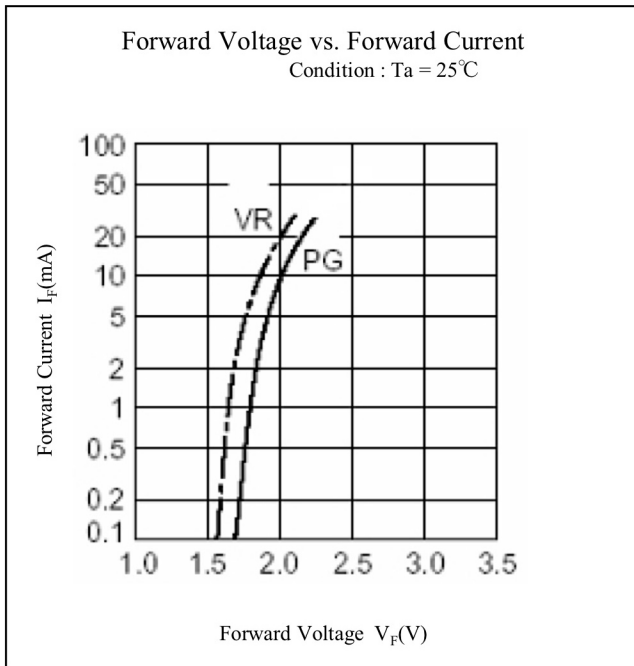
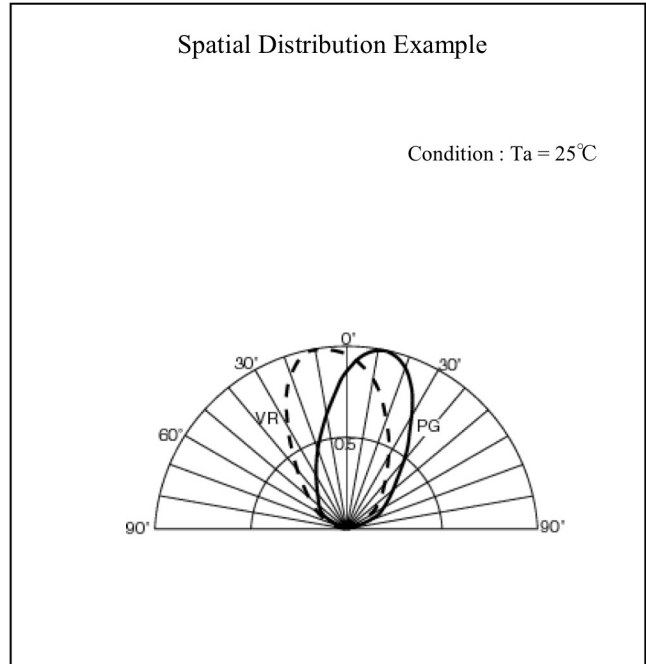
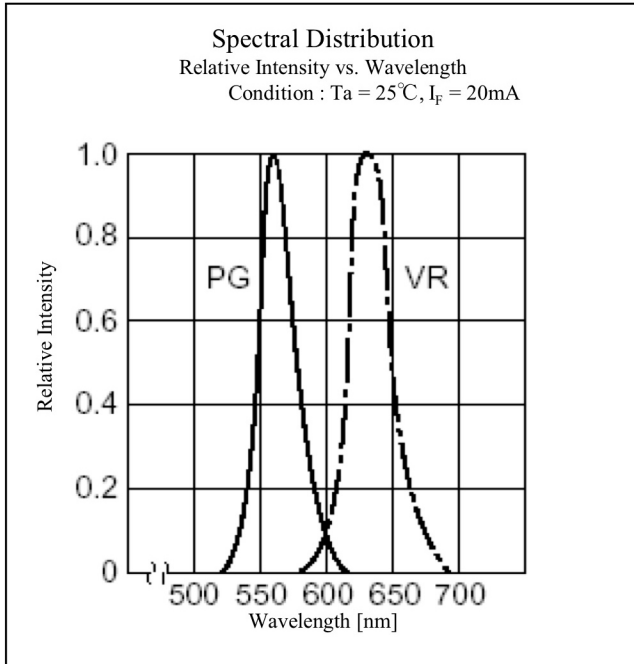
※1 I_{FRM} Measurement condition : Pulse Width \leq 1ms., Duty \leq 1/20.

※ The ratings specified above are under the condition that only one diode is lit.
50% Max. of each rating shall be applied when two diodes are lit simultaneously.

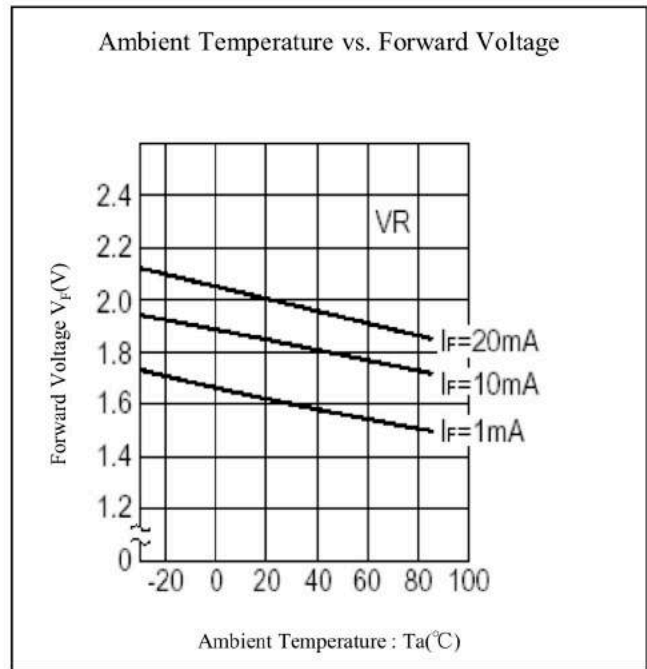
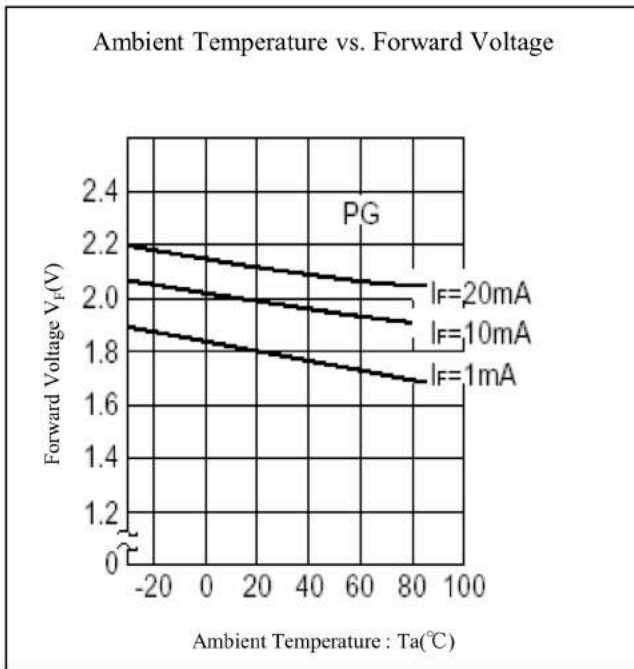
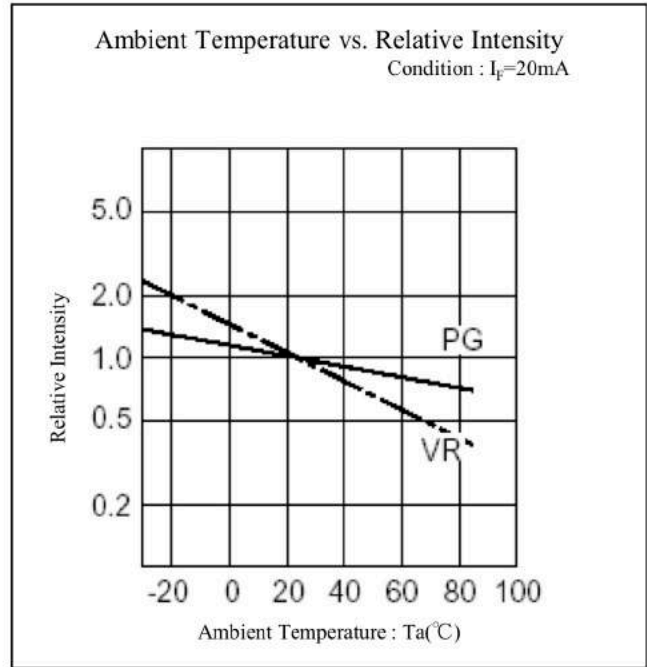
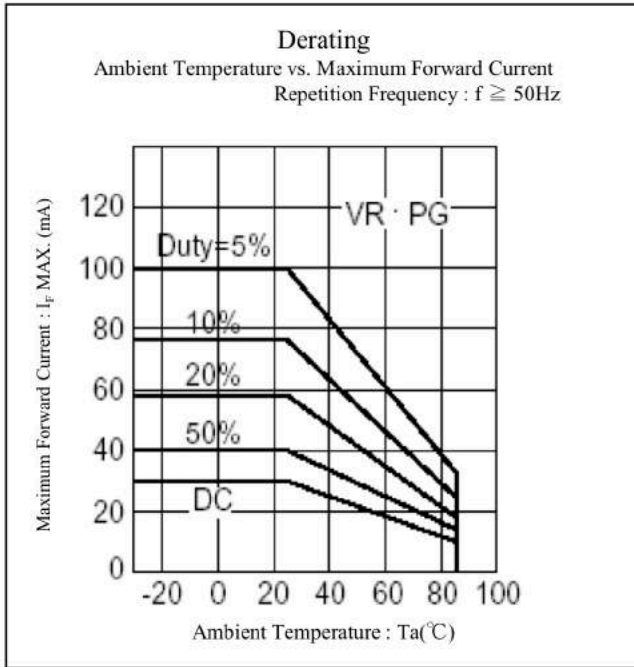
Electro-Optical Characteristics

(Ta=25°C)

Item	Conditions	Symbol	Characteristics			Unit
			TYP.	PG	VR	
Forward Voltage	I _F =20mA	V _F	TYP.	2.1	2.0	V
			MAX.	2.5	2.5	
Reverse Current	V _R =4V	I _R	MAX.	100	100	μA
Peak Wavelength	I _F =20mA	λ _p	TYP.	560	630	nm
Dominant Wavelength	I _F =20mA	λ _d	TYP.	567	624	nm
Spectral Line Half Width	I _F =20mA	Δλ	TYP.	30	30	nm
Half Intensity Angle	I _F =20mA	2θ _{1/2}	TYP.	68	59	deg.

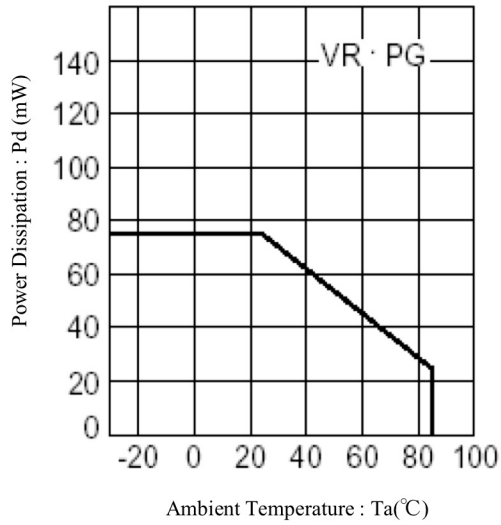


Technical Data (VRPG)

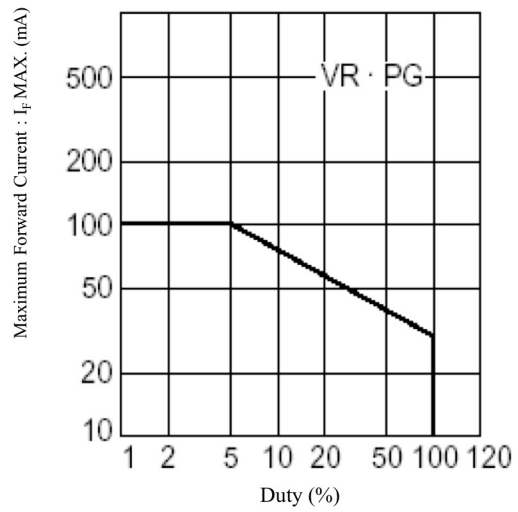


Technical Data (VRPG)

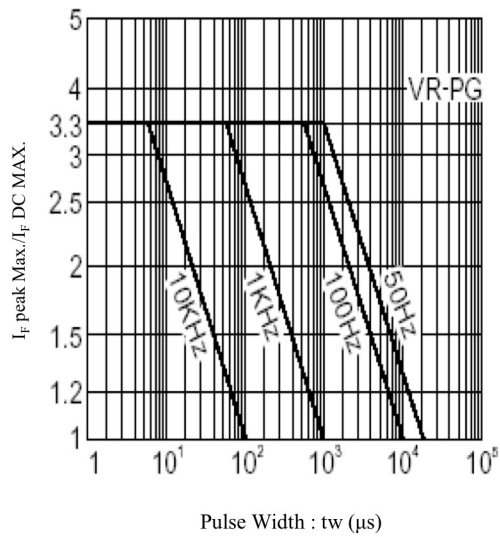
Power Dissipation vs. Ambient Temperature



Dynamic Drive Rating
Duty cycle vs. Maximum Forward Current
Condition : Ta = 25°C

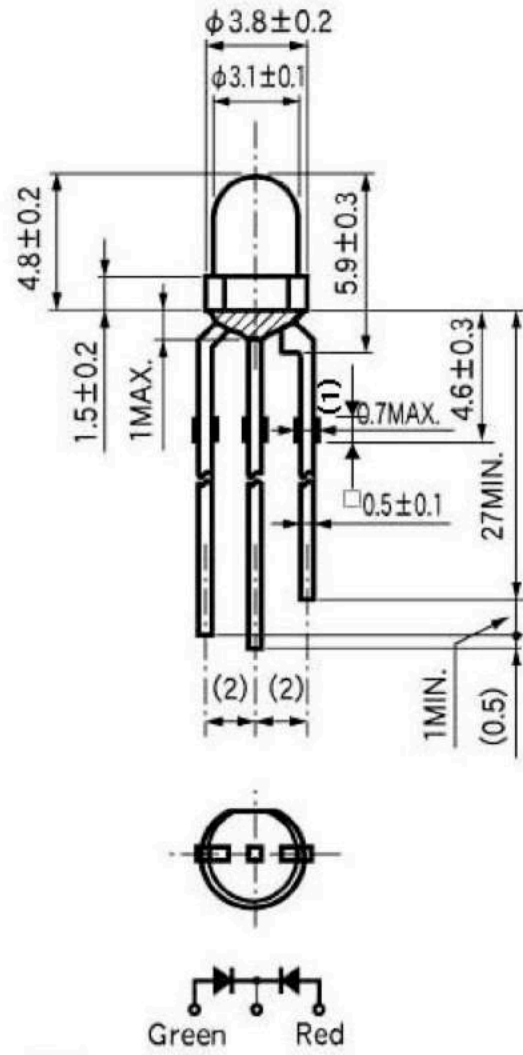


Pulse Width vs. Maximum Tolerable Peak Current
Condition : Ta = 25°C



Package Dimensions

Unit: mm



TTW (Through The Wave) soldering Conditions

Pre-heating	100 °C	(MAX.)
Solder Bath Temp.	265°C	(MAX.)
Dipping Time	5 s	(MAX.)

- 1) The dip soldering process shall be 2 times maximum.
- 2) The product shall be cooled to room temp. before the second dipping process.

※The detail is described to LED and Photodetector handling precautions of home page:

"Mounting through-hole Type Devices" and "Soldering", and use it after the confirmation, please.

Manual Soldering Conditions

Iron tip temp.	360°C	(MAX.)
Soldering time and frequency	3 s	(MAX.)
	2 times	(MAX.)

※The detail is described to LED and Photodetector handling precautions of home page:

"Mounting through-hole Type Devices" and "Soldering", and use it after the confirmation, please.

Reliability Testing Result

Reliability Testing Result	Applicable Standard	Testing Conditions	Duration	Failure
Room Temp. Operating Life	EIAJ ED-4701/100(101)	Ta = 25°C, If = Maximum Rated Current	1,000 h	0/25
Resistance to Soldering Heat	EIAJ ED-4701/300(302)	260±5°C, 3mm from package base	10s	0/25
Temperature Cycling	EIAJ ED-4701/100(105)	Minimum Rated Storage Temperature(30min) ~ Normal Temperature(15min) ~ Maximum Rated Storage Temperature(30min) ~ Normal Temperature(15min)	5 cycles	0/25
Wet High Temp. Storage Life	EIAJ ED-4701/100(103)	Ta = 60±2°C, RH = 90±5%	1,000 h	0/25
High Temp. Storage Life	EIAJ ED-4701/200(201)	Ta = Maximum Rated Storage Temperature	1,000 h	0/25
Low Temp. Storage Life	EIAJ ED-4701/200(202)	Ta = Minimum Rated Storage Temperature	1,000 h	0/25
Lead Tension	EIAJ ED-4701/400(401)	10N, 1time (□0.4 and Flat Package : 5N)	10s	0/10
Vibration, Variable Frequency	EIAJ ED-4701/400(403)	98.1m/s ² (10G), 100 ~ 2KHz sweep for 20min., XYZ each direction	2 h	0/10

Failure Criteria

Items	Symbols	Conditions	Failure criteria
Luminous Intensity	Iv	If Value of each product Luminous Intensity	Testing Min. Value < Spec. Min. Value x 0.5
Forward Voltage	V _F	If Value of each product Forward Voltage	Testing Max. Value ≥ Spec. Max. Value x 1.2
Reverse Current	I _R	V _R = Maximum Rated Reverse Voltage V	Testing Max. Value ≥ Spec. Max. Value x 2.5
Cosmetic Appearance	-	-	Occurrence of notable decoloration, deformation and cracking