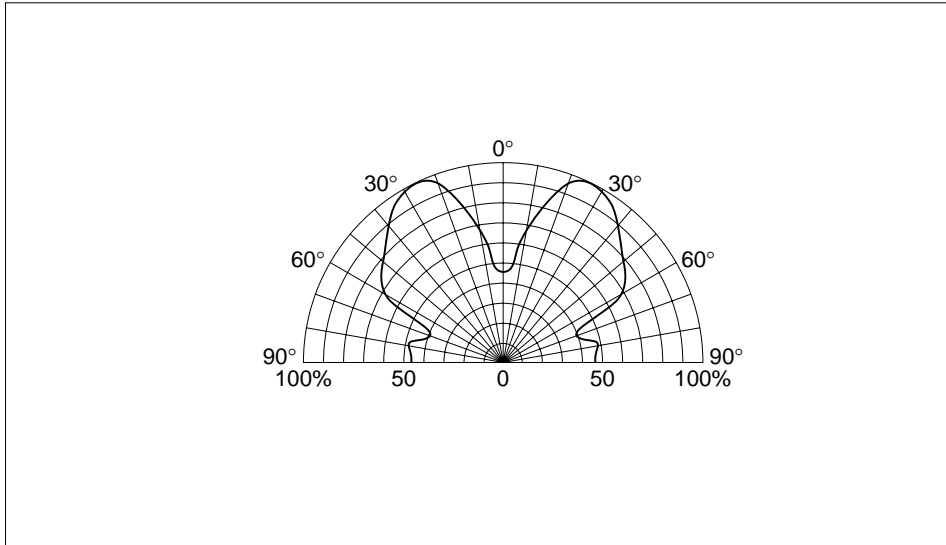


■3φ Inverted-Cone LEDs (for lighting-panels and illumination)

SEL2013 Series

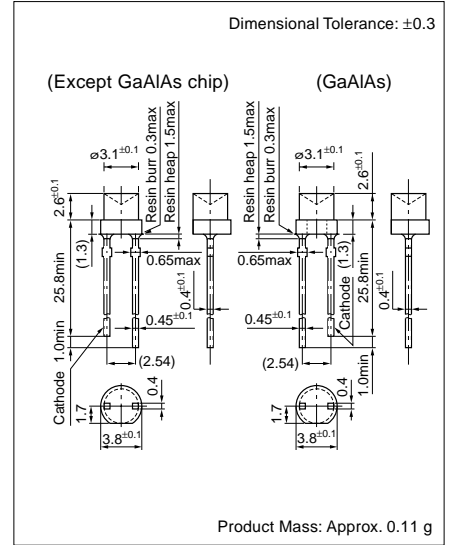
Part Number	Emitting Color	Lens Color	Forward Voltage		Conditions IF (mA)	Luminous Intensity		Peak Wavelength		Dominant Wavelength		Spectrum Half Bandwidth		Chip Material
			TYP (V)	MAX (V)		TYP (mcd)	Conditions IF (mA)	λP (nm) TYP	Conditions IF (mA)	λd (nm) TYP	Conditions IF (mA)	Δλ (nm) TYP	Conditions IF (mA)	
SEL2613CS-S	High luminosity red	Transparent light red	1.75	2.2	10	20	20	660	10	642	10	30	10	GaAlAs
SEL2213C	Red	Water clear	1.9	2.5	10	7.0	20	630	10	620	10	35	10	GaAsP
SEL2813A	Amber	Transparent orange	1.9	2.5	10	8.0	20	610	10	605	10	35	10	GaAsP
SEL2913K	Orange	Transparent light orange	1.9	2.5	10	8.0	20	587	10	590	10	33	10	GaAsP
SEL2713K	Yellow	Transparent yellow	2.0	2.5	10	17	20	570	10	571	10	30	10	GaP
SEL2413E	Green	Transparent green	2.0	2.5	10	14	20	560	10	567	10	20	10	GaP
SEL2413G	Green	Diffused green	2.0	2.5	10	12	20	560	10	567	10	20	10	GaP
SEL2513E	Pure green	Transparent green	2.0	2.5	10	5.0	20	555	10	559	10	20	10	GaP
SEL2E13C	Ultrahigh luminosity	Blue	3.1	4.0	20	150	20	458	20	465	20	25	20	InGaN
SEL2WA13C		White	3.1	4.0	20	280	20	Chromaticity: x=0.300, y=0.295		InGaN				
SEL2WC13C		Bulb Light	3.1	4.0	20	220	20	Chromaticity: x=0.452, y=0.412		InGaN				
SEL2WD13C		Fancy blue green	3.1	4.0	20	200	20	Chromaticity: x=0.170, y=0.365		InGaN				
SEL2WE13C		Light pink	3.1	4.0	20	240	20	Chromaticity: x=0.356, y=0.289		InGaN				
SEL2WF13C		Light blue green	3.1	4.0	20	280	20	Chromaticity: x=0.200, y=0.300		InGaN				
SEL2WH13C		Fancy green	3.1	4.0	20	320	20	Chromaticity: x=0.260, y=0.460		InGaN				
SEL2WJ13C		Fancy pink	3.1	4.0	20	200	20	Chromaticity: x=0.382, y=0.268		InGaN				
SEL2WK13C		Fancy red purple	3.1	4.0	20	150	20	Chromaticity: x=0.421, y=0.221		InGaN				

Directional Characteristics (representative example)



External Dimensions

(Unit: mm)



5-1 Visible Light LEDs

Absolute Maximum Ratings

●Visible Light Unicolor Lamp

Parameter	Unit	Ratings					Conditions
		GaP	GaAsP	GaAlAs	AlGaInP	InGaN	
PD	mW	75			120		
IF	mA	30					
ΔIF	mA/°C	-0.45					25°C or higher
IFP	mA	100			70		f=1kHz, tw≤100μs
VR	V	3		5			
T _{op}	°C	-30 to +85				-30 to +80	
T _{stg}	°C	-30 to +100					

●Visible Light Bicolor Lamp

Parameter	Unit	Ratings					Conditions
		GaP	GaAsP	GaAlAs	AlGaInP	InGaN	
PD	mW	75			120		Same conditions for simultaneous lighting
IF	mA	30					
ΔIF	mA/°C	-0.45					25°C or higher
IFP	mA	100			70		f=1kHz, tw≤100μs
VR	V	4		5			
T _{op}	°C	-30 to +85				-30 to +80	
T _{stg}	°C	-30 to +100					

●Visible Light Unicolor Surface Mount LEDs

Parameter	Unit	Ratings					Conditions
		GaP	GaAsP	GaAlAs	AlGaInP	InGaN	
IF	mA	30			20		
ΔIF	mA/°C	-0.45					25°C or higher
IFP	mA	100 ^{*1}			70 ^{*2}		f=1kHz, tw≤100μs
VR	V	3		5			
T _{op}	°C	-30 to +85				-30 to +80	
T _{stg}	°C	-30 to +100					

*1: 70mA for SEC1005/1007 Series
*2: 50mA for SEC1005/1007 Series

●Visible Light Bicolor Surface Mount LEDs

Parameter	Unit	Ratings		Conditions
		SEC2002/2004		
PD	mW	75 (Same conditions for simultaneous lighting)		
IF	mA	30		
ΔIF	mA/°C	-0.45		25°C or higher
IFP	mA	70		f=1kHz, tw≤100μs
VR	V	4		
T _{op}	°C	-30 to +85		
T _{stg}	°C	-30 to +100		

●Visible Light Three Element Surface Mount LEDs

Parameter	Unit	Ratings		Conditions
		SECT3M02C-S		
		Red	Green/Blue	
PD	mW	75	120	When one chip lights up (same as green/blue for simultaneous lighting)
IF	mA	30		
ΔIF	mA/°C	-0.45		25°C or higher
IFP	mA	70	50	f=1kHz, tw≤100μs
VR	V	5		
T _{op}	°C	-30 to +80		
T _{stg}	°C	-30 to +100		