

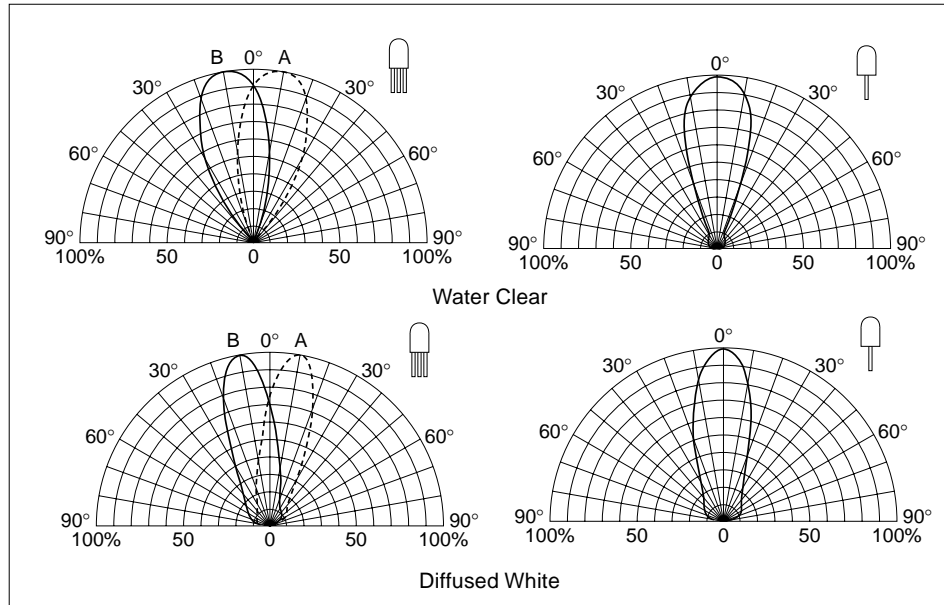
■5φ Round Standard Bicolor LEDs

SML1016/10016 Series

Part Number	Emitting Color	Lens Color	Forward Voltage			Luminous Intensity		Peak Wavelength		Dominant Wavelength		Spectrum Half Bandwidth		Chip Material	Remark
			V <sub>F</sub> (V)	Conditions IF (mA)	I <sub>v</sub> (mcd)	Conditions IF (mA)	λ <sub>P</sub> (nm)	Conditions IF (mA)	λ <sub>d</sub> (nm)	Conditions IF (mA)	Δλ (nm)	Conditions IF (mA)			
SML11516C	A: Deep red	Water clear	2.0	10	15	20	700	10	625	10	100	10	GaP	Cathode common	
	B: Pure green		2.0	10	50	20	555	10	559	10	20	10	GaP		
SML1516W	A: Deep red	Diffused white	2.0	10	6.0	20	700	10	625	10	100	10	GaP	Cathode common	
	B: Pure green		2.0	10	20	20	555	10	559	10	20	10	GaP		
SML1216C	A: Red	Water clear	1.9	10	65	20	630	10	620	10	35	10	GaAsP	Cathode common	
	B: Green		2.0	10	90	20	560	10	567	10	20	10	GaP		
SML1216W	A: Red	Diffused white	1.9	10	60	20	630	10	620	10	35	10	GaAsP	Cathode common	
	B: Green		2.0	10	60	20	560	10	567	10	20	10	GaP		
SML1816W	A: Amber	Diffused white	1.9	10	50	20	610	10	605	10	35	10	GaAsP	Cathode common	
	B: Green		2.0	10	60	20	560	10	567	10	20	10	GaP		
SML19416W	A: Orange	Diffused white	1.9	10	45	20	587	10	590	10	33	10	GaAsP	Cathode common	
	B: Green		2.0	10	60	20	560	10	567	10	20	10	GaP		
SMLT12E16C-S	A: Red	Water clear	2.0	20	750	20	632	20	624	20	20	20	AlGaInP	Cathode common	
	B: Blue		3.3	20	800	20	458	20	465	20	25	20	InGaN		
SMLT12E16W-S	A: Red	Diffused white	2.0	20	250	20	632	20	624	20	20	20	AlGaInP	Cathode common	
	B: Blue		3.3	20	220	20	458	20	465	20	25	20	InGaN		
* SMLT12D16W-S	A: Red	Diffused white	2.0	20	250	20	632	20	624	20	20	20	AlGaInP	Cathode common	
	B: Pure green		3.3	20	750	20	512	20	520	20	35	20	InGaN		
* SMLT18D16C-S	A: Amber	Water clear	2.0	20	1125	20	611	20	605	20	17	20	AlGaInP	Cathode common	
	B: Pure green		3.3	20	3000	20	512	20	520	20	35	20	InGaN		
* SMLT18D16W-S	A: Amber	Diffused white	2.0	20	375	20	611	20	605	20	17	20	AlGaInP	Cathode common	
	B: Pure green		3.3	20	750	20	512	20	520	20	35	20	InGaN		
* SMLT18E16C-S	A: Amber	Water clear	2.0	20	1125	20	611	20	605	20	17	20	AlGaInP	Cathode common	
	B: Blue		3.3	20	800	20	458	20	465	20	25	20	InGaN		
SMLU12416W-S	A: Red	Diffused white	1.9	20	250	20	632	20	625	20	20	20	AlGaInP	Cathode common	
	B: Green		2.1	20	50	20	560	20	567	20	30	20	GaP		
* SMLT1DE16W-S	A: Green	Diffused white	3.3	20	580	20	515	20	520	20	35	20	InGaN	Cathode common	
	B: Blue		3.3	20	220	20	460	20	465	20	25	20	InGaN		

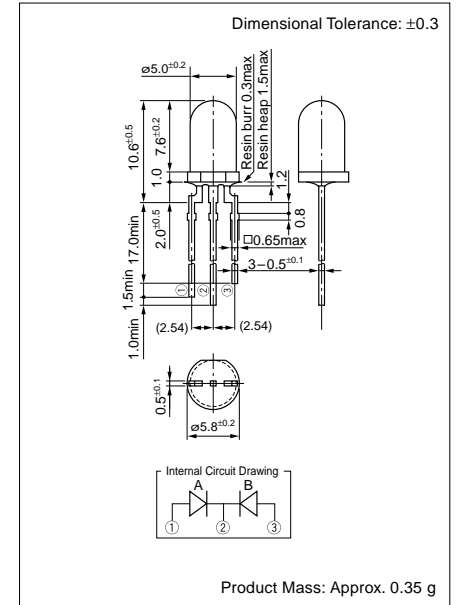
\*Mass production in preparation

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 <sub>op</sub>	°C	-30 to +85				-30 to +80	
T <sub>stg</sub>	°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 <sub>op</sub>	°C	-30 to +85				-30 to +80	
T <sub>stg</sub>	°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 <sup>*1</sup>			70 <sup>*2</sup>		f=1kHz, tw≤100μs
VR	V	3		5			
T <sub>op</sub>	°C	-30 to +85				-30 to +80	
T <sub>stg</sub>	°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 <sub>op</sub>	°C	-30 to +85		
T <sub>stg</sub>	°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 <sub>op</sub>	°C	-30 to +80		
T <sub>stg</sub>	°C	-30 to +100		