# 0603<1.6×0.8 t=0.55mm> Standard Type



## SML-D12\*8 Series EXCELED™

Emitting Color	Pure Green	Green(Yellowish Green)	Yellow	Orange	R	ed	
Material		AlGaInP on GaAs					
Package Size(mm)							
1608(0603) 1.6×0.8(t=0.55)	*	*	-	4	*		
Part No.	SML-D12P8W	SML-D12M8W	SML-D12Y8W	SML-D12D8W	SML-D12U8W	SML-D12V8W	

#### ■ Absolute Maximum Ratings (Ta=25°C)

Part No.	Emitting color	Power dissipation P <sub>D</sub> (mW)	Forward current IF (mA)	Peak forward current *IFP (mA)	Reverse voltage V <sub>R</sub> (V)	Operating temperature Topr	Storage temperature Tstg ( C)	
SML-D12P8W	Pure Green							
SML-D12M8W	Green (Yellowish Green)							
SML-D12Y8W	Yellow	54	20	100	5	-40 to +85	-40 to +100	
SML-D12D8W	Orange	54	20	100	5	-40 10 +65	-40 10 + 100	
SML-D12U8W	Red							
SML-D12V8W	Red							

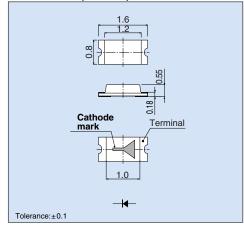
<sup>\*:</sup>Duty ≤ 1/10, 1kHz.

#### ■Electrical Optical Characteristics (Ta=25°C)

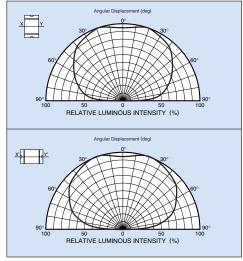
Part No.	Resin Color	Forward voltage V <sub>F</sub>		Reverse current In		Light wavelength Dominant λD		Brightness Iv		
		Typ. (V)	lf * (mA)	Max. (μΑ)	VR (V)	Typ. (nm)	lf * (mA)	Min. (mcd)	Typ. (mcd)	lf * (mA)
SML-D12P8W						560		2.5	6.3	
SML-D12M8W						572		10	25	
SML-D12Y8W	Diffused	2.2	20	10	,	590	00	25	63	00
SML-D12D8W	Milky White	2.2	20	10	4	605	20	40	100	20
SML-D12U8W						620		25	63	
SML-D12V8W						630		16	40	

<sup>\*</sup>Pulse width : 30ms.

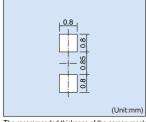
#### ■Dimensions (Unit:mm)



## ■ Directivity (Typ.)

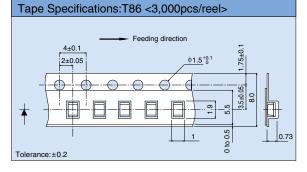


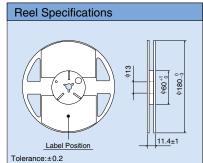
#### ■ Recommended Pad Layout



The recommended thickness of the screen mask for soldering is between 100 and 150µm. The hole size of the screen mask should be same as the recommended land pattern or smaller.

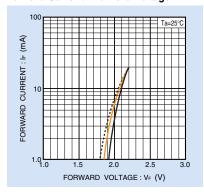
### ■ Packaging Specifications (Unit:mm)



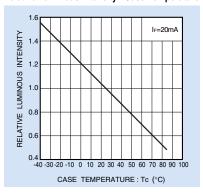


#### **■**Electrical Characteristic Curves

#### **Forward Current - Forward Voltage**

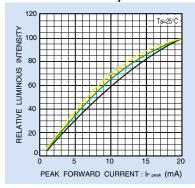


#### **Relative Luminous Intensity - Case Temperature**



SML-D12P8W SML-D12M8W SML-D12Y8W SML-D12D8W SML-D12V8W SML-D12U8W

#### **Relative Luminous Intensity - Forward Current**

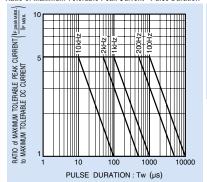


SML-D12P8W
SML-D12M8W

SML-D12Y8W

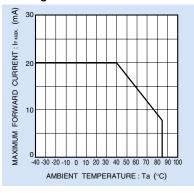
SML-D12D8W
SML-D12V8W
SML-D12U8W

#### Ratio of Maximum Tolerable Peak Current - Pulse Duration



SML-D12P8W SML-D12M8W SML-D12Y8W SML-D12D8W SML-D12V8W SML-D12U8W

#### **Derating**



SML-D12P8W SML-D12M8W SML-D12Y8W SML-D12D8W SML-D12V8W SML-D12U8W

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ROHM CO., LTD. 21, Saiin Mizosaki-cho, Ukyo-ku, Kyoto 615-8585, Japan

TEL:+81-75-311-2121 FAX:+81-75-315-0172



Appendix1-Rev2.0