

●Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Red	Orange	Yellow (NRND)	Green	Unit
		LAP-301VB / VL	LAP-301DB / DL	LAP-301YB / YL	LAP-301MB / ML	
Power dissipation	P_D	448	448	448	448	mW
Power dissipation	P_D / seg	56	56	56	56	mW
Forward current	I_F	20	20	20	20	mA
Peak forward current	I_{FP}	60 ^{*1}	60 ^{*1}	60 ^{*1}	60 ^{*1}	mA
Reverse voltage	V_R	5	5	5	5	V
Operating temperature	T_{opr}	-25 to +75				$^\circ\text{C}$
Storage temperature	T_{stg}	-30 to +85				$^\circ\text{C}$

^{*1} Pulse width 1ms, duty 1 / 5

●Electrical and optical characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Conditions	Red		Orange		Yellow (NRND)		Green		Unit
			Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	
Forward voltage	V_F	$I_F = 10\text{mA}$	1.9	2.6	1.9	2.6	1.9	2.6	1.9	2.6	V
Reverse current	I_R	$V_R = 3\text{V}$	-	100	-	100	-	100	-	100	μA
Peak wavelength	λ_p	$I_F = 10\text{mA}$	650	-	605	-	590	-	572	-	nm
Spectral line halfwidth	$\Delta\lambda$	$I_F = 10\text{mA}$	20	-	20	-	20	-	20	-	nm

© Not designed for radiation resistance.

●Luminous intensity

Parameter	λ_p	Type	Min.	Typ.	Max.	Unit
Red	650	LAP-301VB	14	36	-	mcd
		LAP-301VL				
Orange	605	LAP-301DB	56	250	-	mcd
		LAP-301DL				
Yellow (NRND)	590	LAP-301YB	90	450	-	mcd
		LAP-301YL				
Green	572	LAP-301MB	36	100	-	mcd
		LAP-301ML				

© Condition $I_F=10\text{mA}$

●Iv classification

Parameter	Type	Item	Iv classification	Unit
Red	LAP-301VB LAP-301VL	“ N ”	14 to 28	mcd
		“ P ”	22 to 45	mcd
		“ Q ”	36 to 71	mcd
		“ R ”	56 to 110	mcd
		“ S ”	90 to (180)	mcd
Orange	LAP-301DB LAP-301DL	“ R ”	56 to 110	mcd
		“ S ”	90 to 180	mcd
		“ T ”	140 to 280	mcd
		“ U ”	220 to 450	mcd
		“ V ”	360 to (710)	mcd
Green	LAP-301MB LAP-301ML	“ Q ”	36 to 71	mcd
		“ R ”	56 to 110	mcd
		“ S ”	90 to 180	mcd
		“ T ”	140 to 280	mcd
		“ U ”	220 to (450)	mcd

© Condition $I_F=10\text{mA}$

●Electrical and optical characteristics curves

Fig.1 Forward Current vs. Forward Voltage

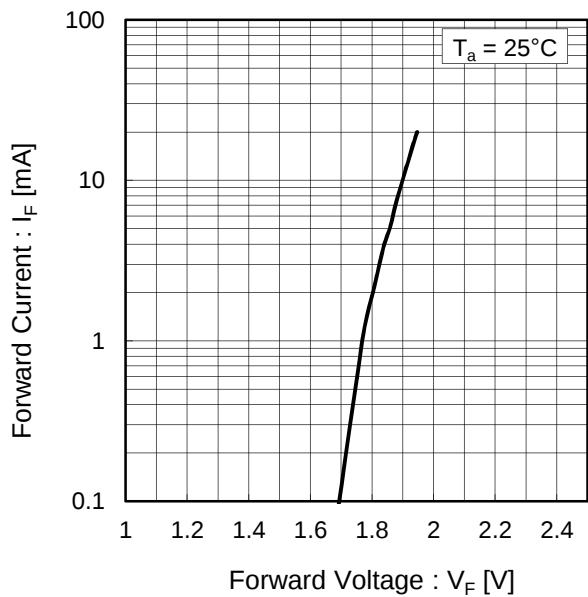


Fig.2 Relative Luminous Intensity vs. Forward Current

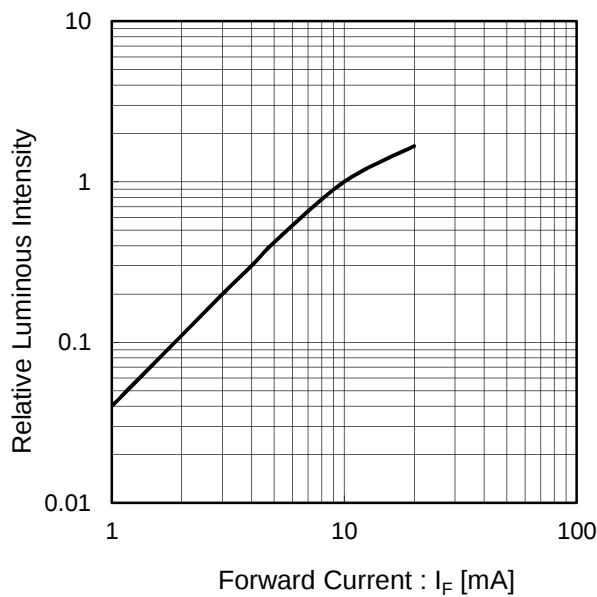


Fig.3 Relative Luminous Intensity vs. Case Temperature

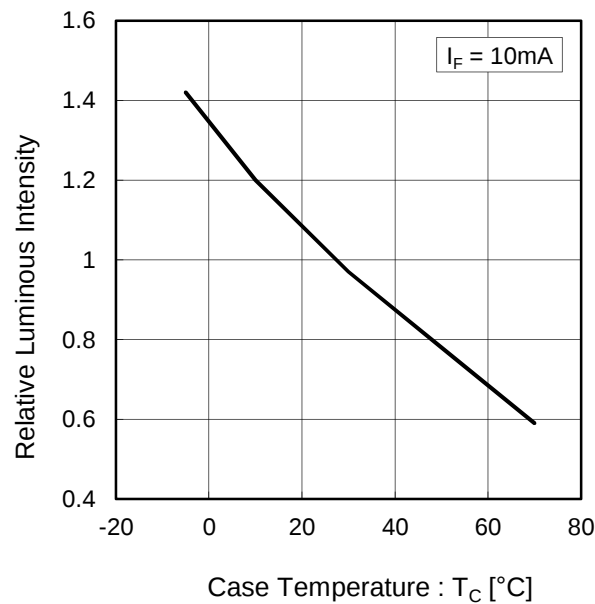
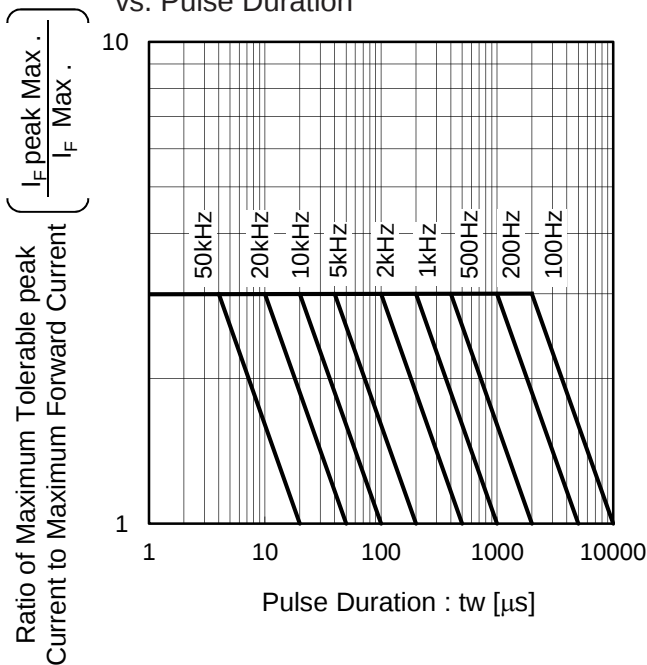
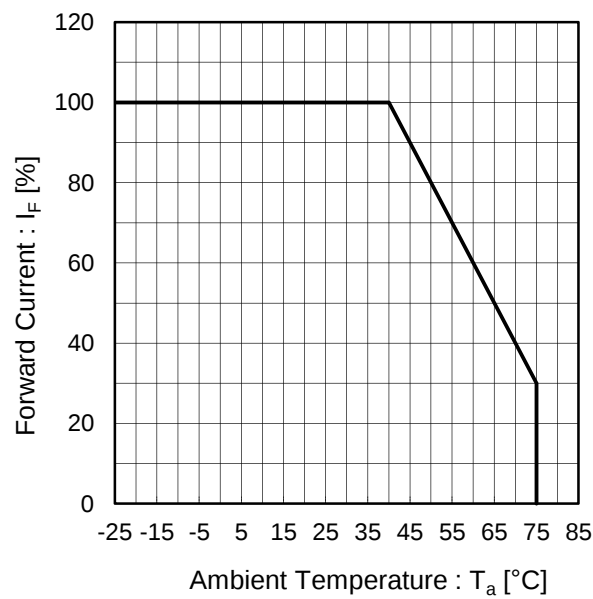


Fig.4 Ratio of Maximum Tolerable Peak Current vs. Pulse Duration



●電氣的・光学的特性曲線

Fig.5 Derating



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