

SIEMENS

**Super SIDELED®
High-Current LED**

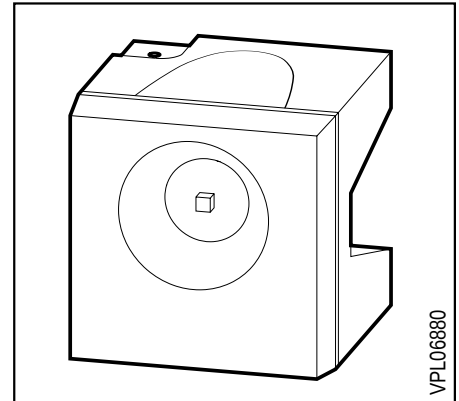
**LS A672, LO A672, LY A672
LG A672, LP A672**

Besondere Merkmale

- Gehäusefarbe: weiß
- als optischer Indikator einsetzbar
- besonders geeignet bei hohem Umgebungslicht durch erhöhten Betriebsstrom (≤ 50 mA DC)
- zur Hinterleuchtung, Lichtleiter- und Linseneinkopplung
- für alle SMT-Bestück- und Reflow-Löttechniken geeignet
- gegurtet (12-mm-Filmgurt)
- Störimpulsfest nach DIN 40839

Features

- color of package: white
- for use as optical indicator
- appropriate for high ambient light because of the higher operating current (≤ 50 mA DC)
- for backlighting, optical coupling into light pipes and lenses
- suitable for all SMT assembly and reflow soldering methods
- available taped on reel (12 mm tape)
- load dump resistant acc. to DIN 40839



Typ	Emissions- farbe	Farbe der Lichtaustritts- fläche	Lichtstärke	Lichtstrom	Bestellnummer
Type	Color of Emission	Color of the Light Emitting Area	Luminous Intensity $I_F = 50 \text{ mA}$ $I_V \text{ (mcd)}$	Luminous Flux $I_F = 50 \text{ mA}$ $\Phi_V \text{ (mlm)}$	Ordering Code
■ LS A672-LP	super-red	colorless clear	10 ... 80	-	Q62703-Q2761
■ LS A672-N			25 ... 50	100 (typ.)	Q62703-Q2849
■ LS A672-P			40 ... 80	180 (typ.)	Q62703-Q3226
■ LS A672-NR			25 ... 200	-	Q62703-Q2850
■ LO A672-LP	orange	colorless clear	10 ... 80	-	Q62703-Q2548
■ LO A672-N			25 ... 50	100 (typ.)	Q62703-Q2851
■ LO A672-P			40 ... 80	180 (typ.)	Q62703-Q2852
■ LO A672-NR			25 ... 200	-	Q62703-Q2853
■ LY A672-LN	yellow	colorless clear	10 ... 50	-	Q62703-Q2553
■ LY A672-N			25 ... 50	100 (typ.)	Q62703-Q2854
■ LY A672-P			40 ... 80	180 (typ.)	Q62703-Q2855
■ LY A672-MQ			16 ... 125	-	Q62703-Q2856
LG A672-LP	green	colorless clear	10 ... 80	-	Q62703-Q2544
LG A672-N			25 ... 50	100 (typ.)	Q62703-Q2857
LG A672-P			40 ... 80	180 (typ.)	Q62703-Q2858
LG A672-MQ			16 ... 125	-	Q62703-Q2859
LP A672-KN	pure green	colorless clear	6.3 ... 50	-	Q62703-Q2860
LP A672-L			10 ... 20	45 (typ.)	Q62703-Q3838
LP A672-M			16 ... 32	75 (typ.)	Q62703-Q3839
LP A672-N			25 ... 50	100 (typ.)	Q62703-Q3148
LP A672-LP			10 ... 80	-	Q62703-Q2863

■ Nicht für Neuentwicklungen / Not for new design

Streuung der Lichtstärke in einer Verpackungseinheit $I_{V \max} / I_{V \min} \leq 2.0$.

Luminous intensity ratio in one packaging unit $I_{V \max} / I_{V \min} \leq 2.0$.

Grenzwerte Maximum Ratings

Bezeichnung Parameter	Symbol Symbol	Werte Values	Einheit Unit
Betriebstemperatur Operating temperature range	T_{op}	– 55 ... + 100	°C
Lagertemperatur Storage temperature range	T_{stg}	– 55 ... + 100	°C
Sperrschichttemperatur Junction temperature	T_j	+ 100	°C
Durchlaßstrom Forward current	I_F	50	mA
Stoßstrom Surge current $t \leq 10 \mu s, D = 0.005$	I_{FM}	1	A
Sperrspannung Reverse voltage	V_R	5	V
Verlustleistung Power dissipation	P_{tot}	190	mW
Wärmewiderstand Thermal resistance Sperrschicht / Umgebung Junction / air Montage auf PC-board*) (Padgröße je $\geq 16 \text{ mm}^2$) mounted on PC board*) (padsizes $\geq 16 \text{ mm}^2$ each)	$R_{th JA}$	330	K/W

*) PC-board: FR4

Kennwerte ($T_A = 25^\circ\text{C}$) Characteristics

Bezeichnung Parameter	Symbol Symbol	Werte Values					Einheit Unit
		LS	LO	LY	LG	LP	
Wellenlänge des emittierten Lichtes (typ.) Wavelength at peak emission (typ.) $I_F = 10\text{ mA}$	λ_{peak}	635	610	586	565	557	nm
Dominantwellenlänge (typ.) Dominant wavelength (typ.) $I_F = 10\text{ mA}$	λ_{dom}	628	605	590	570	560	nm
Spektrale Bandbreite bei 50 % $I_{\text{rel max}}$ (typ.) Spectral bandwidth at 50 % $I_{\text{rel max}}$ (typ.) $I_F = 10\text{ mA}$	$\Delta\lambda$	45	40	45	25	22	nm
Abstrahlwinkel bei 50 % I_v (Vollwinkel) Viewing angle at 50 % I_v	2ϕ	120	120	120	120	120	deg.
Durchlaßspannung (typ.) Forward voltage (max.) $I_F = 50\text{ mA}$	V_F V_F	2.0 3.8	2.1 3.8	2.2 3.8	2.6 3.8	2.6 3.8*)	V V
Sperrstrom (typ.) Reverse current (max.) $V_R = 5\text{ V}$	I_R I_R	0.01 10	0.01 10	0.01 10	0.01 10	0.01 10	μA μA
Kapazität (typ.) Capacitance $V_R = 0\text{ V}$, $f = 1\text{ MHz}$	C_0	40	35	35	60	80	pF
Schaltzeiten: Switching times: I_v from 10 % to 90 % (typ.) I_v from 90 % to 10 % (typ.) $I_F = 100\text{ mA}$, $t_p = 10\text{ }\mu\text{s}$, $R_L = 50\text{ }\Omega$	t_r t_f	350 200	500 250	350 200	500 250	500 250	ns ns

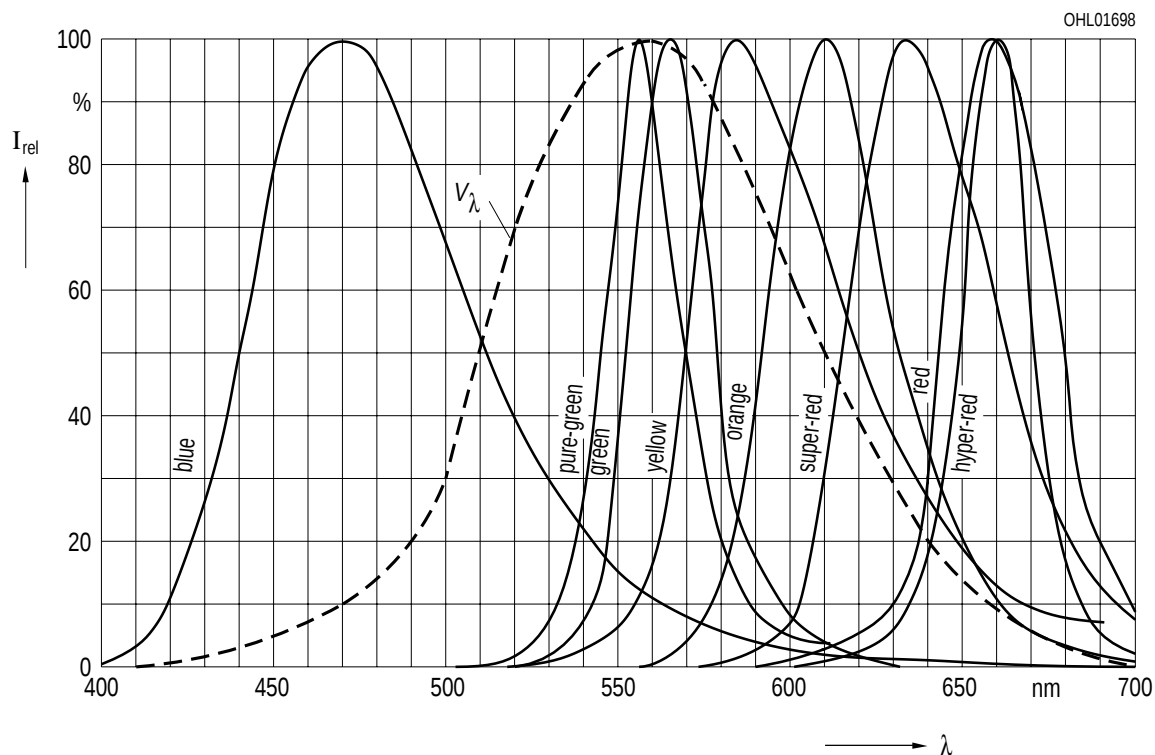
*) $V_F \text{ max} = 3.2\text{ V}$ as of Febr. 97

Relative spektrale Emission $I_{\text{rel}} = f(\lambda)$, $T_A = 25^\circ\text{C}$, $I_F = 10\text{ mA}$

Relative Spectral Emission

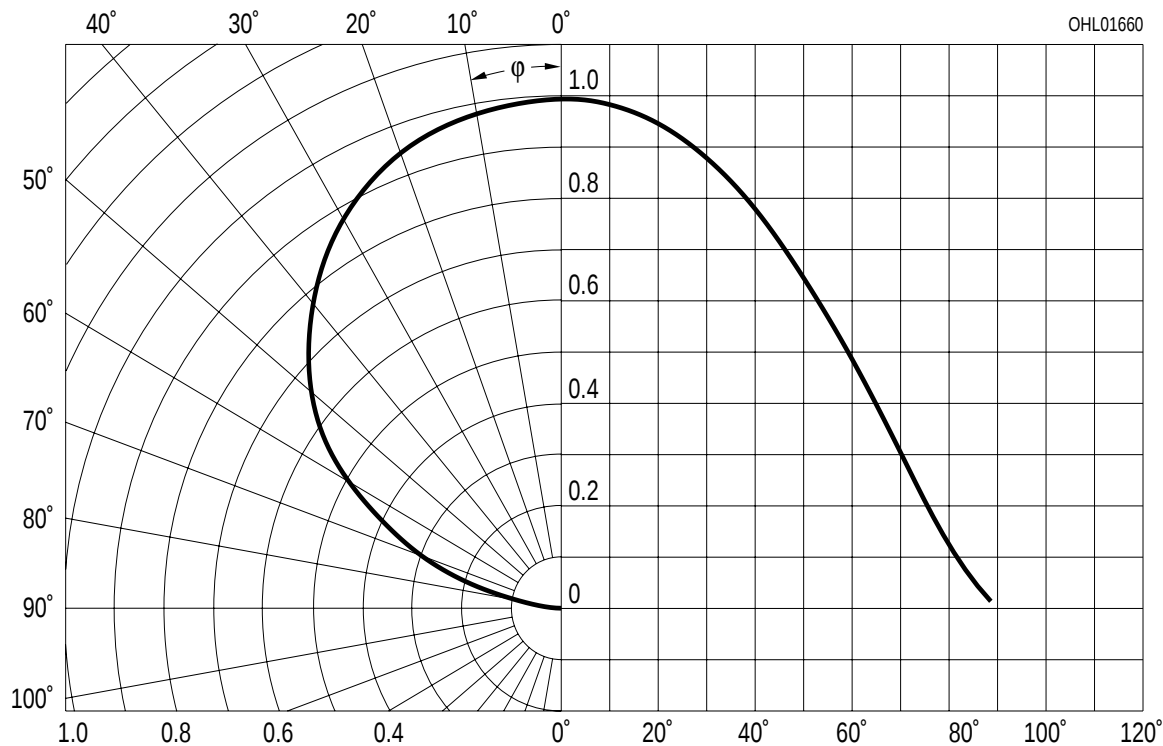
$V(\lambda)$ = spektrale Augenempfindlichkeit

Standard eye response curve



Abstrahlcharakteristik $I_{\text{rel}} = f(\varphi)$

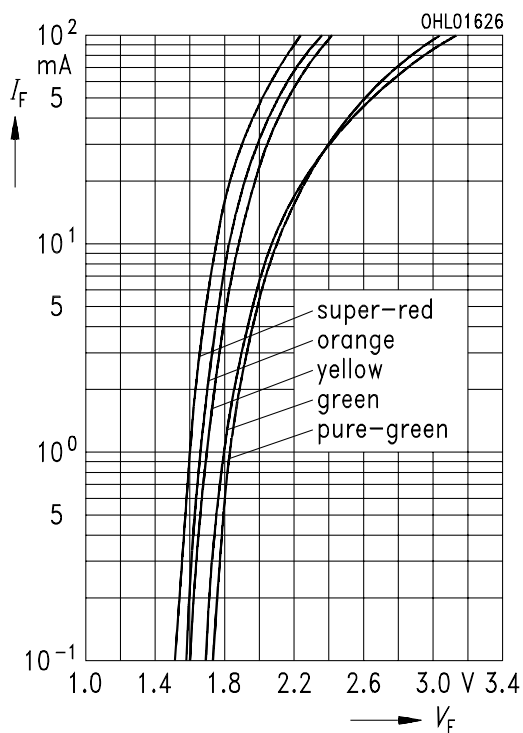
Radiation characteristic



Durchlaßstrom $I_F = f(V_F)$

Forward current

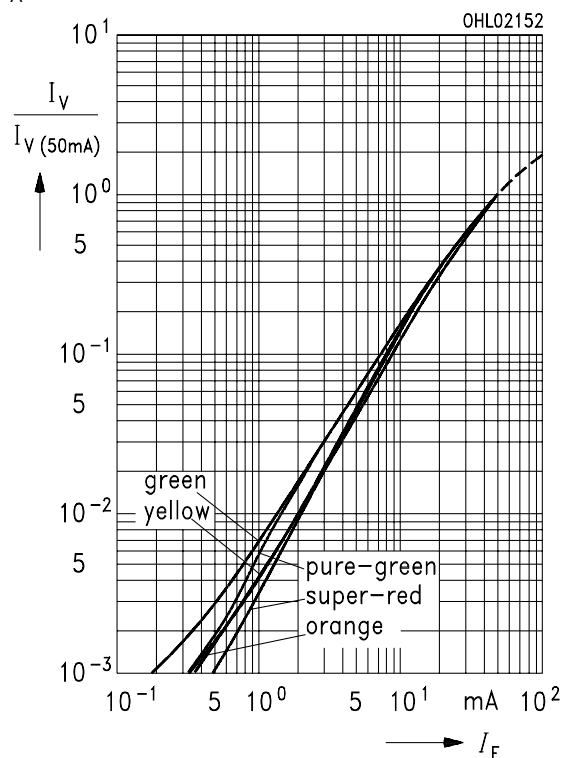
$T_A = 25^\circ\text{C}$



Relative Lichtstärke $I_V/I_{V(50\text{ mA})} = f(I_F)$

Relative luminous intensity

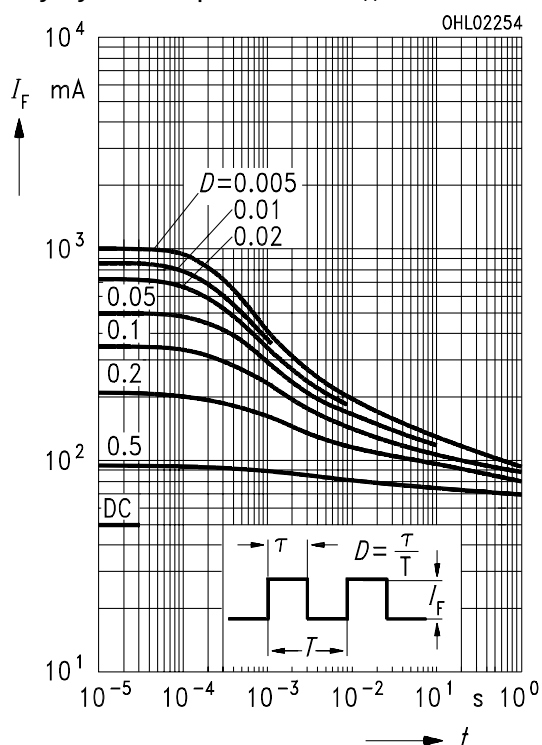
$T_A = 25^\circ\text{C}$



Zulässige Impulsbelastbarkeit $I_F = f(t_p)$

Permissible pulse handling capability

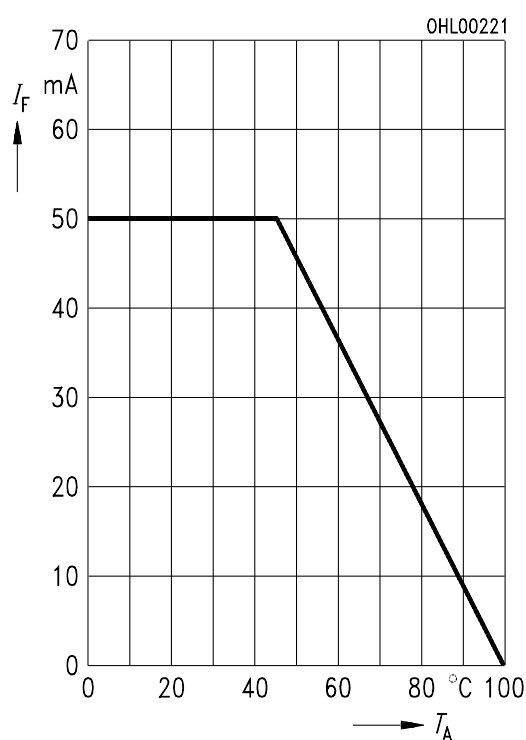
Duty cycle $D = \text{parameter}$, $T_A = 25^\circ\text{C}$



Maximal zulässiger Durchlaßstrom

Max. permissible forward current

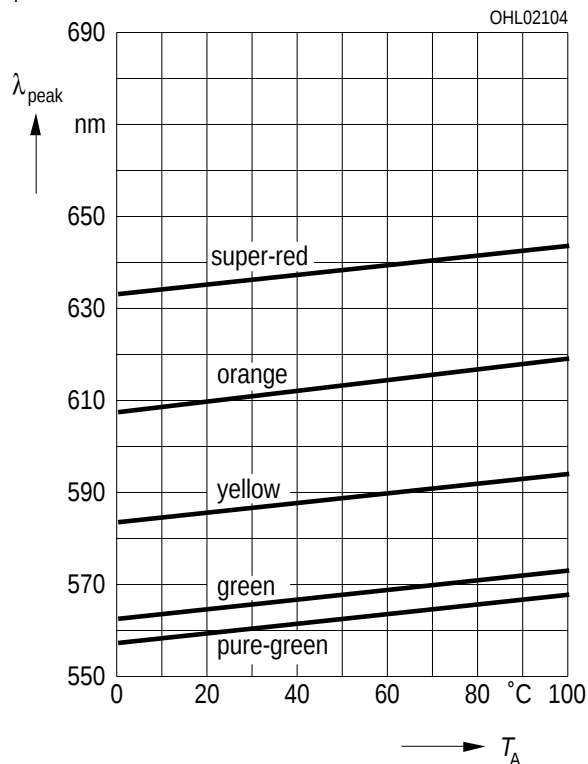
$I_F = f(T_A)$



Wellenlänge der Strahlung $\lambda_{\text{peak}} = f(T_A)$

Wavelength at peak emission

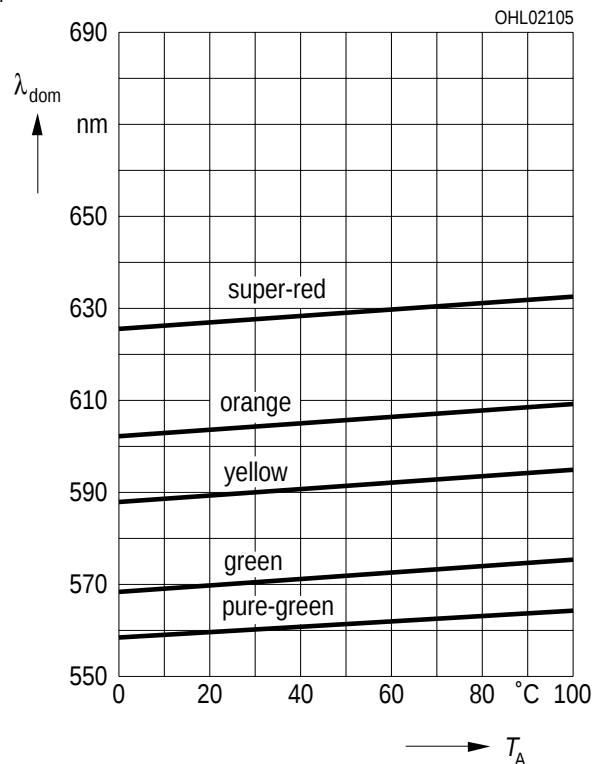
$I_F = 10 \text{ mA}$



Dominantwellenlänge $\lambda_{\text{dom}} = f(T_A)$

Dominant wavelength

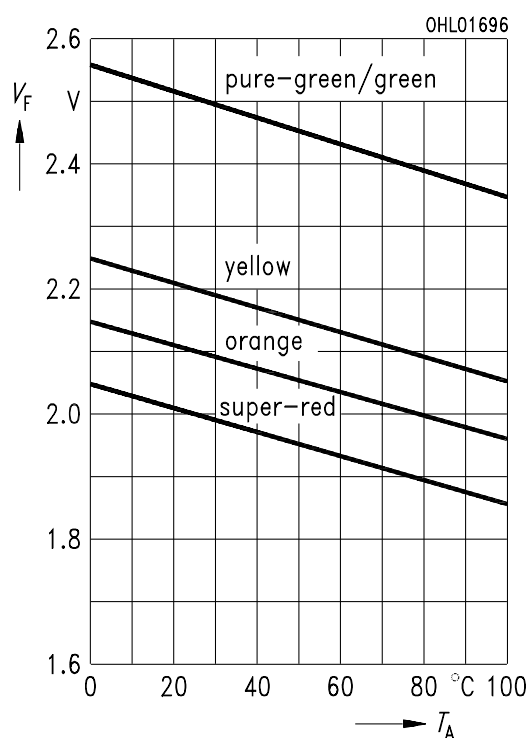
$I_F = 10 \text{ mA}$



Durchlaßspannung $V_F = f(T_A)$

Forward voltage

$I_F = 50 \text{ mA}$



Relative Lichtstärke $I_V / I_{V(25^\circ\text{C})} = f(T_A)$

Relative luminous intensity

$I_F = 50 \text{ mA}$

