

Calculation of necessary external current limiting resistor and max. permissible dissipation at increased ambient temperature

For T_{amb} < 25°C

$R_S = U_B - U_F / I_F$

R_S = Series-resistor in kΩ

U_B = Connection voltage in V

U_F = Forward voltage in V
(set min. or typical value)

I_F = DC current flow in mA
(max. value see limit value)

For T_{amb} < 25°C first calculate I_F max.

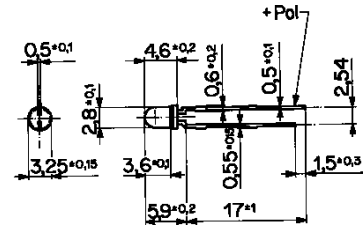
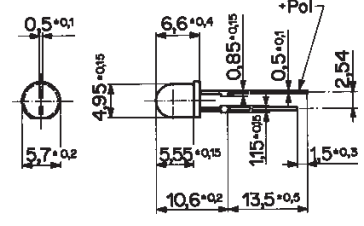
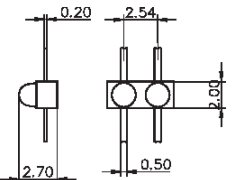
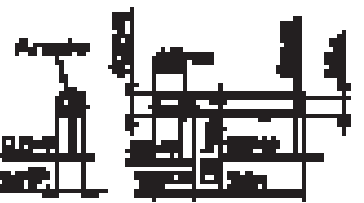
$I_F \text{ max.} = P_{\text{tot}} - \Delta P / U_F \text{ max.}$

P_{tot} = max. permissible power dissipation in mW

$\Delta P = (T_{\text{amb}} > 25^\circ\text{C}) P_D \text{ in mW}$

U_F max. = Forward voltage in V
(set max. value)

I_F max. = max. permissible DC current flow
for appropriate T_{amb} in mA

Dimensions	Part No.	Light color	Form	Limit value		Value at T _u = 25 °C					
				Forward DC current flow	Power dissipation	Deration	Forward voltage	Luminous intensity	Viewing angle	Peak wave length	Reverse voltage
				I _F max.[mA]	T _u =25°C P _{tot} [mW]	T _u >25°C P _D [mW/°C]	I _F =10 mA U _F [V]	I _F =10 mA I _v [mcd]	±γ [degree]	λ _{peak} [nm]	U _R [V]
	0925.0029	red	3mm T1	45	150	1,9	1,6 (<2,0)	1,0 - 3,2	70	660	5
	0925.0030	green					2,0 (<2,6)	4,0 - 12,5		565	
	0925.0067	yellow					2,0 (<2,6)	6,3 - 20		585	
	0925.0059	red	5mm T1-3/4	45	150	1,9	2,0 (<2,6)	2,5 - 8,0	140	635	5
	0925.0060	green						2,5 - 8,0		565	
	0925.0061	yellow						2,5 - 5,0		586	
	0925.9201	red	5mm T1-3/4	45	150	1,9	1,6 (<2,0)	1,0 - 2,0	50	660	5
	0925.9202	green					2,0 (<2,6)	4,0 - 12,5		565	
	0925.9203	yellow					2,0 (<2,6)	4,0 - 8,0		586	
	0925.9204	red	5 x 2.5mm T1-3/4	45	150	1,9	2,0 (<2,6)	2,5 - 5,0	100	635	5
	0925.9205	green								560	
	0925.9206	yellow								590	
	0925.9299	red		90	135		1,5 (<3,0)	1,0 - 3,0	90	635	5
	0925.9300	yellow		90	135					583	
	0925.9301	green		60	85					565	
	0925.9724	red	3mm T1	7,5	20		1,8 (<2,6)	0,63 - 5**	60	635	5
	0925.9725	green					1,9 (<2,6)	1 - 5**		565	
	0925.9726	yellow					2,0 (<2,7)	1 - 5**		586	
	0925.9730	red	3mm T1	45	150		1,6 (<2,0)	10 - 32	50	660	5
	0925.9731	green					2,0 (<2,6)	16 - 50		565	
	0925.9732	yellow					2,0 (<2,6)	10 - 32		586	