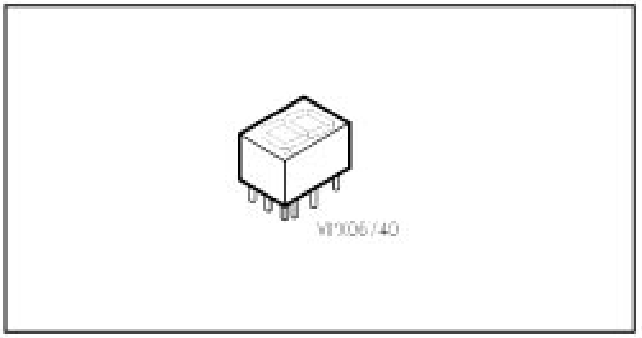
SIEMENS

Seven Segment Display
7 mm (0.28")
Low Current Version

HDN 1075 O
HDN 1077 O

Features

- Excellent character appearance
- Evenly lighted segments
- Wide viewing angle $2\varphi = 50°$
- Mitred corners on segments
- Grey package provides optimum contrast
- Low power consumption
- IC-compatible
- Right hand decimal



Type	Polarity	Color of emission	Luminous intensity/ Segment I_F = 2 mA I_V (µcd)	Ordering code
HDN 1075 O	common anode	super-red	260 (typ.)	Q68000-A4315
HDN 1077 O	common cathode	super-red	260 (typ.)	Q68000-A4317

Maximum Ratings (T_A = 25 °C)

Description	Symbol	Value	Unit
Operating temperature range	T_{op}	0... + 85	°C
Storage temperature range	T_{stg}	– 40 ... + 85	°C
Lead soldering temperature, 2 mm from base	T_S	260	°C for 3 s
Forward surge current per segment or DP [1]	I_{FM}	100	mA
DC forward current per segment or DP [2]	I_F	15	mA
Reverse voltage per segment or DP	V_R	6	V
Total power dissipation	P_{tot}	320	mW

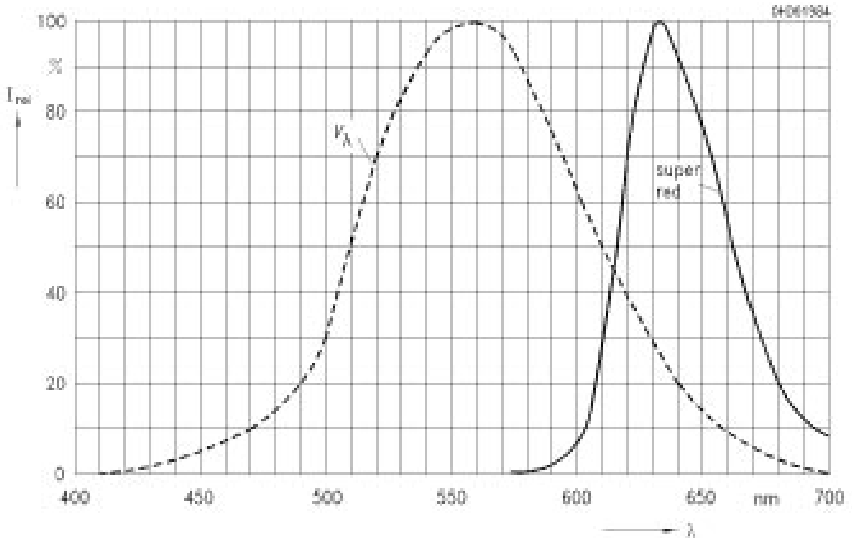
1) Do not exceed maximum average current per segment (see graph of the peak forward current)

2) Derate maximum average current above T_A = 75 °C at 0.5 mA/°C per segment

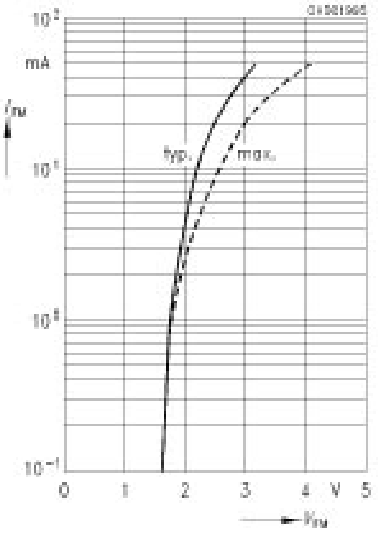
Characteristics (T_A = 25 °C)

Parameter	Symbol	Values			Unit
		min	typ.	ma	
Luminous intensity per segment (Digit average)					
2 mA	I_V	180	260	-	µcd
5 mA	I_V	-	1000	-	µcd
20 mA PK, 1:4 Duty factor	I_V	-	1300	-	µcd
Peak wavelength	λ_{peak}	-	635	-	nm
Dominant wavelength (Digit average)	λ_{dom}	612	-	625	nm
Forward voltage per segment or DP I_F = 2 mA	V_F	-	1.8	-	V
Break down voltage per Segment I_R = 10 µA	V_{BR}	6	15	-	V
Thermal resistance LED junction-to-pin	$R_{thJ\ PIN}$	-	-	180	°C/W/Seg

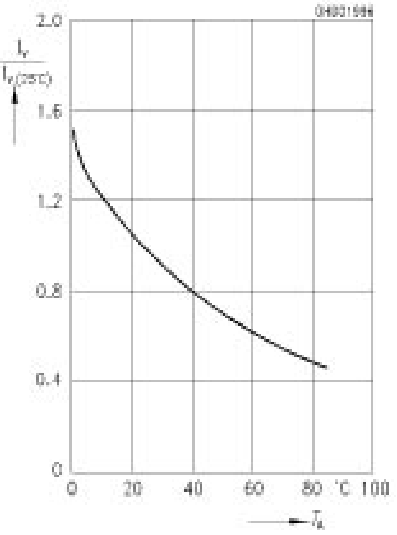
Relative spectral emission $I_{rel} = f(\lambda)$
$V(\lambda)$ = Standard eye response curve



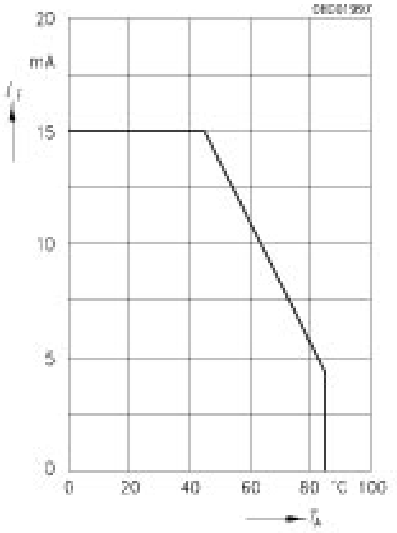
Peak forward current $I_{FM} = f(V_{FM})$
$t_p/T = 0.001$, $t_p = 10\ \mu s$, $T_A = 25\ °C$



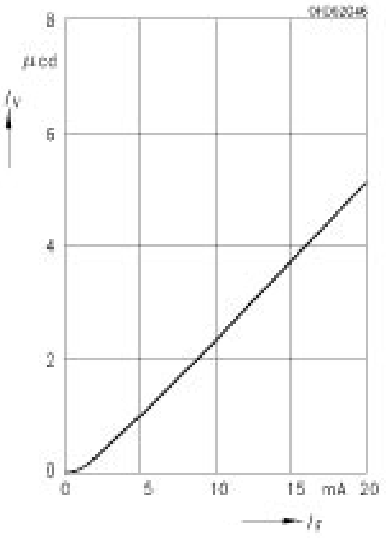
Rel. luminous intensity $I_V/I_{V\ (25\ °C)} = f(T_A)$
$I_F = 2$ mA



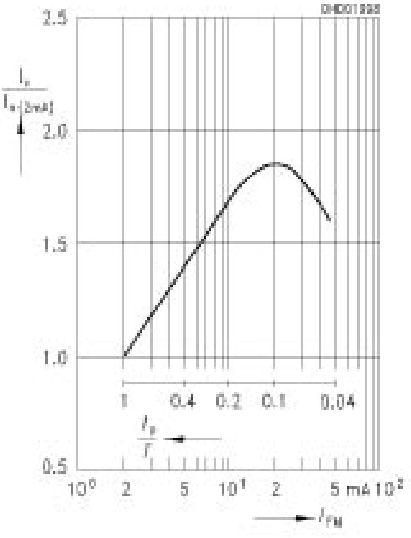
Max. permissible forward current
$I_F = f(T_A)$



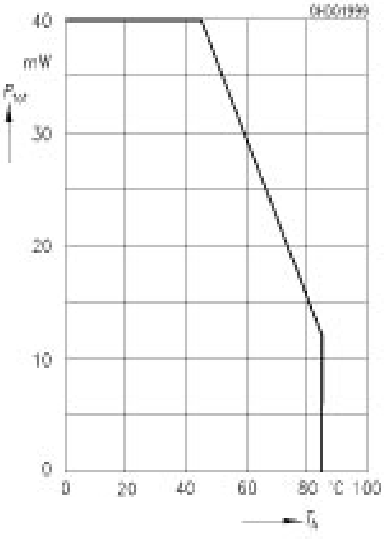
Luminous intensity $I_V = f(I_F)$
$T_A = 25$ °C



Relative efficiency $I_V/I_{V\,(2\ mA)} = f(I_{FM})$
$T_A = 25$ °C



Total power dissipation per segment
$P_{tot} = f(T_A)$



Package Outlines