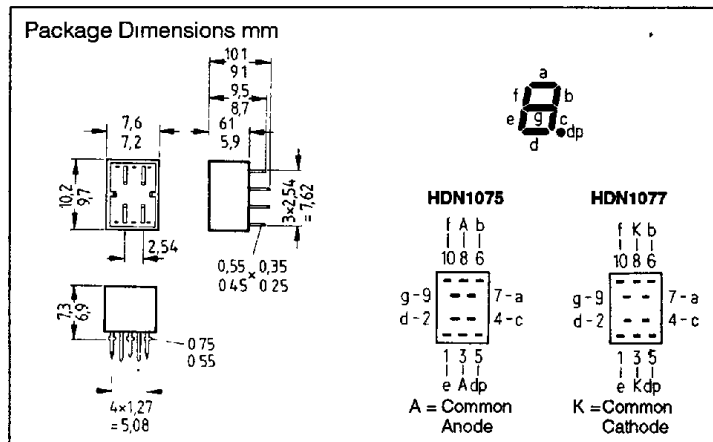
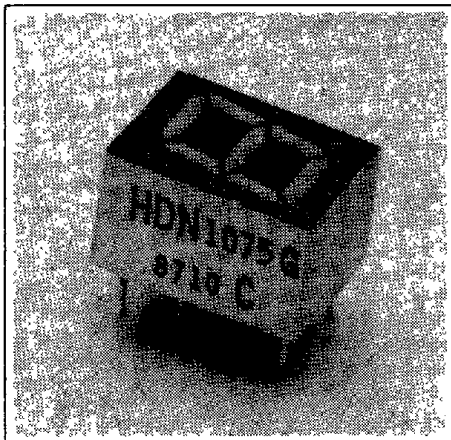


**SIEMENS**

**SUPER-RED HDN1075/10770**  
**GREEN HDN1075/1077G**

**0.28" (7 mm) SEVEN SEGMENT NUMERIC DISPLAY**  
**LOW CURRENT**

T-41-33



**FEATURES**

- Current Consumption 2 mA
- Direct Drive by CMOS Microprocessor, Gate and LSTTL Modules
- Space Saving
- Lower Assembly Costs
- No Display and LED Driver Modules
- Good Readability in Unfavorable Lighting Conditions
- Climate-Proof
- High Packing Density
- Grey Package for Optimal Contrast
- Long Service Life
- Shock and Vibration Resistant

**DESCRIPTION**

The HDN1075/1077 are one digit, seven segment, low current LED displays. The character height is 7 mm. The displays are available in super-red and green. Applications include state-of-the-art industrial and consumer electronics, especially where low current consumption is required, e.g. portable appliances and battery-operated appliances.

**Maximum Ratings**

Total Power Dissipation per Segment or Dot <sup>1)</sup> (T <sub>A</sub> =70°C) (P <sub>TOT</sub> )	20 mW
Operating and Storage Temperature Range (T <sub>OP</sub> , T <sub>STG</sub> )	-40°C to +85°C
Forward Current per Segment or Dot <sup>1)</sup> (I <sub>F</sub> )	7.5 mA
Surge Current per Segment <sup>1)</sup> (t <sub>p</sub> ≤ 10 μs, D ≤ 0.005) (I <sub>PM</sub> )	150 mA
Reverse Voltage (V <sub>R</sub> )	5 V
Thermal Resistance (R <sub>THMAX</sub> )	170 K/W
Junction Temperature (T <sub>J</sub> )	100°C

**Characteristics (T<sub>A</sub>=25°C)**

Parameter	Symbol	Super-Red	Green	Unit
Wavelength at Peak Emission (I <sub>F</sub> =2 mA)	λ <sub>PEAK</sub>	635	565	nm
Dominant Wavelength (I <sub>F</sub> =2 mA)	λ <sub>DOM</sub>	628	567	nm
Spectral Bandwidth @ 50% I <sub>F</sub> (I <sub>F</sub> =2 mA)	Δλ	45	25	nm
Forward Voltage (I <sub>F</sub> =2 mA)	V <sub>F</sub>	1.8 (≤2.6)	1.9 (≤2.6)	V
Reverse Current per Segment (V <sub>R</sub> =5 V)	I <sub>R</sub>	0.01 (≤10)	0.01 (≤10)	μA
Capacitance per Segment (V <sub>R</sub> =0 V, f=1 MHz)	C <sub>0</sub>	3	15	pF
Switching Times (I <sub>F</sub> =25 mA, t <sub>p</sub> =1 μs)				
Rise Time from 10% to 90%	t <sub>r</sub>	200	450	ns
Fall Time from 90% to 10%	t <sub>f</sub>	150	200	ns
Luminous Intensity per Segment <sup>2)</sup> (I <sub>F</sub> =2 mA)	I <sub>v</sub>	600	600	μcd

**Notes:**

1. This value applies to an ambient temperature of T<sub>A</sub> ≤ 70°C

2. Deviation of the absolute values within one digit  $\frac{I_{v,MAX} - I_{v,MIN}}{I_{v,MIN}} \leq 2$

See graph numbers 1, 2, 3B, 4B, 5B, 6D, 9, 11A on pages 25 - 27