

HPWG-N510

# SnapLED Six LED Multi-Function Signal

## Technical Data DS10

Using Lumileds' patented solderless clinch technology and SnapLED emitters, this six-LED round assembly is an integrated LED signal solution complete with control circuitry. By using two input terminals, the signal may switch between two brightness modes. The product features a compact and rugged design and provides a cost effective source for vehicle Turn-Tail-Stop lamps.



### Benefits

- Integrated LED Solution for Turn/Tail/Stop Applications
- Life of Vehicle Light Source
- Standard Design for Multiple Vehicle Applications
- Rugged and Compact

### Features

- Drive Circuitry and Connector Pins Included
- Compact, Low Profile Package
- Light Source Sufficient for SAE/ECE/JIS Stop/Tail Requirements

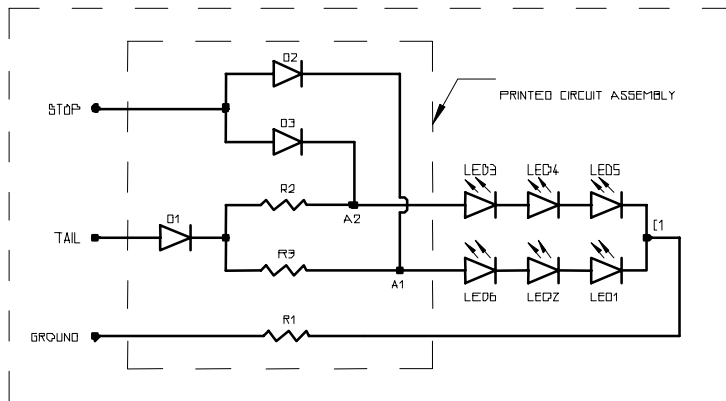
## Optical & Electrical Characteristics

PART NUMBER	LED COLOR	VOLTAGE (V)	MODE	TOTAL FLUX <sup>(1, 2, 3)</sup> $\Phi_v$ (lm)		POWER CONSUMPTION (W)	
				MIN.	MAX.	MIN.	MAX.
HPWG-N510	RED-ORANGE	12.8	STOP	39.5	81.3	2.8	3.5
			TAIL	3.7	7.8	0.19	0.23
		13.5	STOP	41.8	86.1	3.3	4.1
			TAIL	4.1	8.6	0.22	0.25

## Color Characteristics

PART NUMBER	DOMINANT WAVELENGTH <sup>(1, 2)</sup> $\lambda_d$ (nm)	
	MIN.	MAX.
HPWG-N510	611	634

## Circuit Schematic



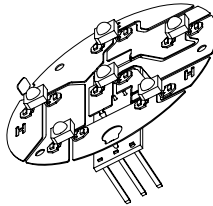
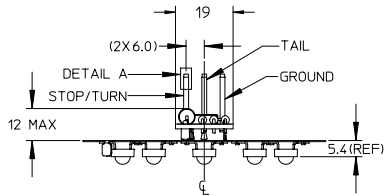
### Notes:

- $\Phi_v$  is the total steady state flux of the assembly after thermal stabilization.
- The thermal resistance assumed is  $R_{th-junction-ambient} = 12.9^\circ\text{C/W}$ , which represents the thermal resistance of the LED assembly when the substrate is potted in epoxy resin. To determine junction temperature, multiply  $R_{th}$  by power consumption and add to ambient temperature.
- No LED emits more than 2 times the flux of any other LED within the same assembly.

### Notes:

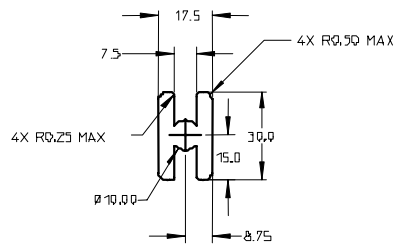
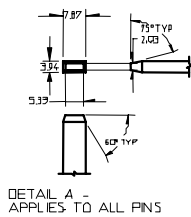
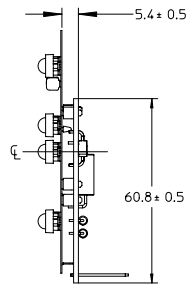
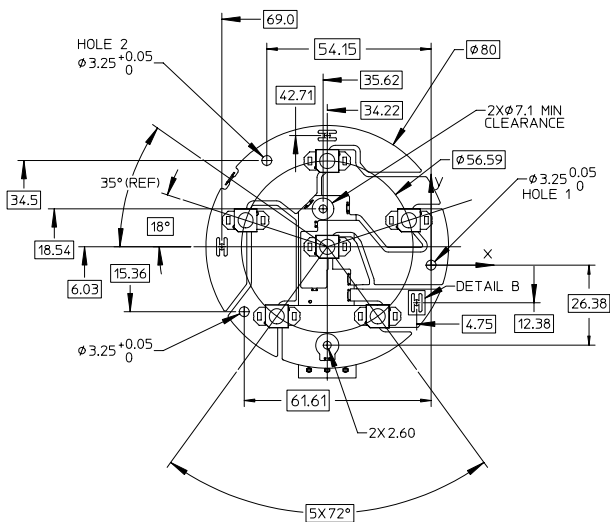
- The dominant wavelength is derived from the CIE Chromaticity Diagram and represents the perceived color of the signal.
- The dominant wavelength does not vary between emitters by more than 8nm within the same assembly.

# Outline Drawing



## Notes:

1. See SnapLED 150 datasheet for emitter (HPWS-TH00) specifications.
2. Dimensions are in millimeters.
3. Dimensions without tolerances are nominal.



## Absolute Maximum Ratings

PARAMETER	HPWG-N510	UNITS
DC INPUT OPERATING VOLTAGE <sup>[1]</sup>	16	V
POWER DISSIPATION (STOP)	3.5 (@12.8V)	W
POWER DISSIPATION (STOP)	4.1 (@13.5V)	W
REVERSE VOLTAGE (STOP & TAIL)	500 (@I <sub>R</sub> = 200 μA)	V
OPERATING TEMPERATURE RANGE <sup>[2]</sup>	-40 to +85 (@12.8V)	°C
OPERATING TEMPERATURE RANGE <sup>[2]</sup>	-40 to +85 (@13.5V)	°C
OPERATING TEMPERATURE RANGE <sup>[2]</sup>	-40 to +25 (@15.5V)	°C
STORAGE TEMPERATURE RANGE	-55 to +100	°C
LED JUNCTION TEMPERATURE	125	°C

### Notes:

- 16V operation is allowed at T<sub>ambient</sub> = 25°C only.
- Temperature range for sustained operation based on R<sub>th-junction-ambient</sub> = 12.9°C/W.

## Company Information

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Lumileds is a world-class supplier of Light Emitting Diodes (LEDs) producing billions of LEDs annually. Lumileds is a fully integrated supplier, producing core LED material in all three base colors (Red, Green, Blue) and White. Lumileds has R&D development centers in San Jose, California and Best, The Netherlands. Production capabilities in San Jose, California and Malaysia.

Lumileds is pioneering the high-flux LED technology and bridging the gap between solid-state LED technology and the lighting world. Lumileds is absolutely dedicated to bringing the best and brightest LED technology to enable new applications and markets in the Lighting world.



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