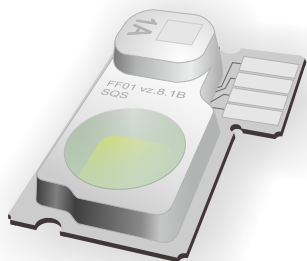


# Spot Low Voltage LED Light Engines

## Low Voltage LED Light Module



FF-01 HIC is an integrated high bright LED light source designed and manufactured as a component in the form of a compact module.

LED Light HIC introduces special LED lighting concept. The concept generally offers ready-to-use LED light source which is composed of an electronic driving circuitry part and an optical part, integrated in one compact package featuring reliability, uniformity, efficiency and configurability.

### Features:

- switching step-down current source included
- input voltage 5-42 V DC (depending on a number of LED chips)
- analog and PWM dimming
- solid state luminophores applicable to harsh environments
- all-in-one package - hybrid integrated circuit (HIC)
- designed for optional custom-made modifications

**Applications:**

- LED lighting fixtures
- Spot lights
- Automotive lighting

Designers and manufacturers of lighting solutions are getting a powerful component for wide range of industrial applications requiring a safe DC power supply. They are getting LED light component in one ready-to-use package just to be connected to a standard DC power.

Photometrical parameters	Min.	Typical	Max.
Total optical power <sup>2)</sup>	-	-	1275 lm
Light efficacy	-	85 lm/W	-
CCT (correlated color temperature)	5000 K	-	-
CRI (color rendering index)	-	72	-
Typical beam angle	-	123°	-

Electrical parameters	Min.-	Typical	Max.
Power consumption <sup>2)</sup>	-		15 W
DC input voltage <sup>2)</sup>	5 V	-	40 V
Current switching frequency <sup>2)</sup>	-	-	500 KHz
Thermal resistance R <sub>θ(jl ED-MCPCB)</sub> <sup>3)</sup>	-	1°C/W	-

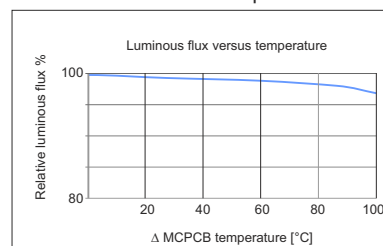
Other parameters	
Dimension	27 x 20 x 7 mm
Maximum operating MCPCB temperature <sup>1)</sup>	80°C
Storage temperature	from -40°C to +85°C

<sup>4)</sup> MCPCB - metal core printed circuit board.

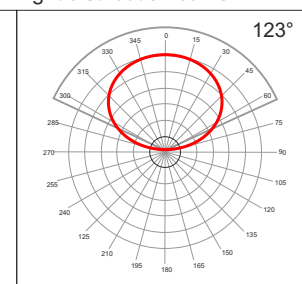
<sup>2)</sup> It depends on FF-01 type (different configuration of LED chips, current, nominal DC voltage).

a) Value is predicted for final MCPCB versions where LEDs will be placed directly on MCPCB. Available developing univers MCPCB version (possible to attach various types of LED bare die chips) has thermal resistance approximately  $5^{\circ}\text{C}/\text{W}$  (there are placed extra ceramic inserts under the LED chips which substantially increase thermal resistance).

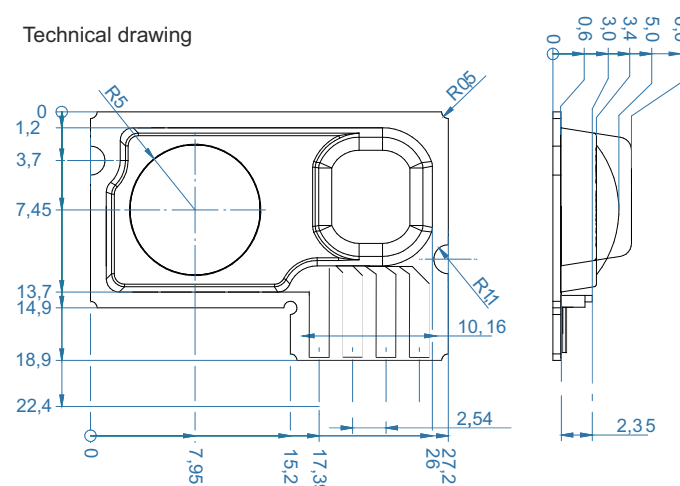
### Luminous flux versus temperature



### Light distribution curve



## Technical drawing



## Low-voltage module standard design

