High light modules with POWER TOPLED® diodes

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specifications:

- **high efficiency (low power consumption with very intensive light of POWER TOPLED® diodes)**
  for example: for red colour diodes the same stream of light can be obtained at over six times lower electric power, in comparison to solutions based on conventional fluorescent lamps (with red filter)
- **very long lifetime and reliability of luminous elements**
  producer of diodes (OSRAM company) declares over 100 thousand hours of work (which gives minimum 10 - year- time of constant light)
- **high resistance for mechanical damages and possibility of work in difficult weather conditions**
  light modules work properly in a very broad range of temperatures (from –30°C to +65°C), special layer of lacquer protects modules against water damages
- **easy and convenient assembling of units, easy control of stream light**
  diodes are assembled on PCB size 30 x 30 x 4 [mm], they can be screwed (screw hole Φ=3,5mm) or glued (e.g. by two-sided scotch tape), light intensity control (by modulation PWM) can be done in the range from 10% to 100% with any dynamics (e.g. light pulsating)
- **low (safe) voltage supply**
  modules are supplied with the voltage under 20 VDC, diodes current is stabilised with thermal control (which protects diodes against overheating and enables having repeatable stream light independently from the distance between modules and power supply source)

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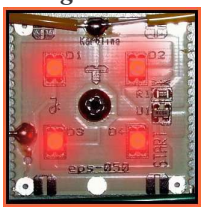
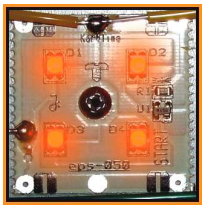
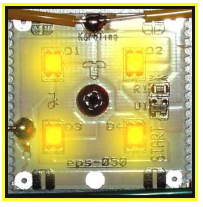
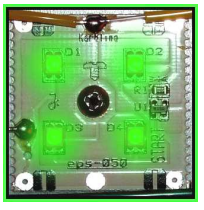
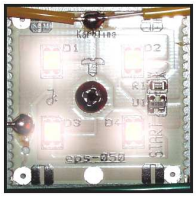
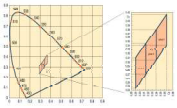
single module:	*LED colour*	*luminous flux*	*electric power*	*density: modules/m² (measured E from 20cm)*		
				low	***normal***	***high***
	**red** (super-red) λ_{dom}=633 nm	**$\Phi_{V(typ.)}$=5,6 lm** viewing angle 2φ=120° (for 0,5·I_V)	**0,5 W** I_S=50 mA U_S=10V (+/-5%)	50-70 units/m² (circa 250Lx)	100 units/m² (circa 400Lx)	130-160 units/m² (circa 600Lx)
	**red** (amber) λ_{dom}=617 nm	**$\Phi_{V(typ.)}$=8 lm** viewing angle 2φ=120° (for 0,5·I_V)	**0,5 W** I_S=50 mA U_S=10V (+/-5%)	50-70 units/m² (circa 330Lx)	90 units/m² (circa 500Lx)	120-150 units/m² (circa 750Lx)
	**yellow** λ_{dom}=587 nm	**$\Phi_{V(typ.)}$=9,2 lm** viewing angle 2φ=120° (for 0,5·I_V)	**0,6 W** I_S=50 mA U_S=11V (+/-5%)	50-60 units/m² (circa 370Lx)	90 units/m² (circa 600Lx)	120-150 units/m² (circa 900Lx)
	**green** (true-green) λ_{dom}=525 nm	**$\Phi_{V(typ.)}$=7,6 lm** viewing angle 2φ=120° (for 0,5·I_V)	**0,6 W** I_S=30 mA U_S=18V (+/-5%)	50-60 units/m² (circa 270Lx)	80 units/m² (circa 400Lx)	120-150 units/m² (circa 670Lx)
	**white** x=0,32 y=0,31 	**$\Phi_{V(typ.)}$=9,6 lm** viewing angle 2φ=120° (for 0,5·I_V)	**0,6 W** I_S=30 mA U_S=18V (+/-5%)	50-60 units/m² (circa 380Lx)	80 units/m² (circa 550Lx)	120-150 units/m² (circa 900Lx)