

LED Investigations – LED data

LED peak wavelengths (from catalogue specifications)

On Board LEDs

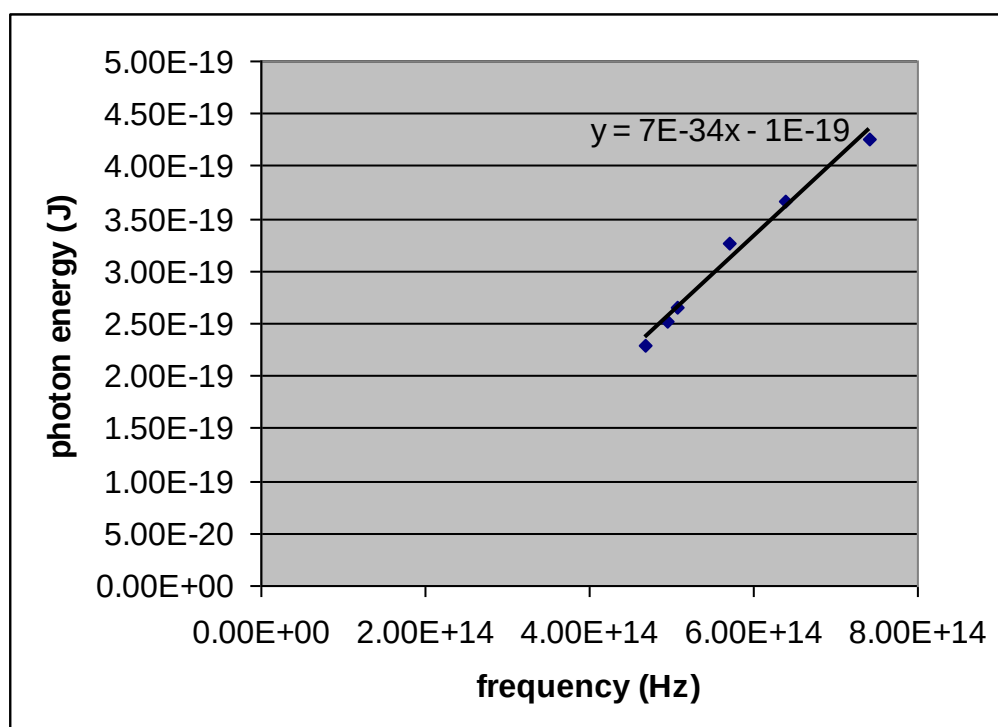
LED Red	640nm
LED Green	525nm
LED Blue	470nm

Extra LEDs

Orange 5mm clear	605nm
Yellow 5mm clear	590nm
Violet 5mm clear	405nm
Red 5mm diffuse	640nm
Infrared 5mm filtered	950nm
Infrared 3mm clear	940nm
White	

This data can be processed against the measured turn-on voltages to determine an estimate of Planck's constant.

Colour	Turn-on Voltage (V)	wavelength (nm)	Frequency (Hz)	Energy = eV (J)
Red	1.43	640	4.69E+14	2.29E-19
Orange	1.57	605	4.96E+14	2.51E-19
Yellow	1.66	590	5.08E+14	2.66E-19
Green	2.04	525	5.71E+14	3.26E-19
Blue	2.29	470	6.38E+14	3.66E-19
Violet	2.66	405	7.41E+14	4.26E-19



LED – Manufacturer's Type Numbers

Enter the type numbers in a search engine to find data sheets – also downloadable from most suppliers – Farnell, Rapid, RS etc.

LED Manufacturer's type numbers

On Board LEDs

LED Red	Kingbright L-7113SRC-E
LED Green	Kingbright L-7113VGC-E
LED Blue	Kingbright L-7113QBC-D

download data sheets for on board LEDs from

Red

<http://www.rapidonline.com/electronic-components/kingbright-l-7113src-e-5mm-super-bright-red-led-3500mcd-55-0>

Green

<http://uk.rs-online.com/web/p/visible-leds/4663504/>

Blue

<http://uk.rs-online.com/web/p/visible-leds/4663548/>

Extra LEDs

Orange 5mm clear	TruOpto OSOR5111A-OP
Yellow 5mm clear	TruOpto OSYL5111A-PQ
Violet 5mm clear	TruOpto OSSV5111A
Red 5mm diffuse	Kingbright L-7113SRD-E
Infrared 5mm filtered	Osram SFH 4516
Infrared 3mm clear	Kingbright L-34F3C
White	TruOpto OSM5YK5B61C-KL

download data sheets for Yellow and Violet from

<http://www.rapidonline.com/electronic-components/5mm-high-brightness-15-deg-leds-81462>

download data sheet for diffuse red from

<http://www.rapidonline.com/electronic-components/kingbright-l-7113srd-e-5mm-1-85v-super-bright-red-led-400mcd>

download data sheet for 5mm filtered IR from

<http://uk.rs-online.com/web/p/ir-leds/7350598/>

download data sheet for 3mm clear IR from

<http://www.rapidonline.com/electronic-components/kingbright-l-34f3c-3mm-infrared-emitting-diode-58-0100>

download data sheet for white from

<http://www.rapidonline.com/electronic-components/5mm-warm-white-led-1120mcd-55-3000>