



LUXEON SunPlus Series for Horticulture

LEDs engineered to deliver the precise wavelengths of light needed to improve crop yield



The LUXEON SunPlus Series is purpose-built to enable ease of system design for Horticulture applications. The LUXEON SunPlus Series offers the only LEDs available today that are binned and tested based on Photosynthetic Photon Flux (PPF). The LUXEON SunPlus Series includes two different packages: LUXEON SunPlus 20 Line, which is 2.0mm x 2.0mm and LUXEON SunPlus 35 Line, which is 3.5mm x 3.5mm. The LUXEON SunPlus Series includes options for single driver solutions and multi-channel, color tunable solutions.

FEATURES AND BENEFITS

120° and 150° viewing angle of choice for various design needs

Two package options 2.0mm x 2.0mm and 3.5mm x 3.5mm for design freedom

PRIMARY APPLICATIONS

Horticulture



LUXEON SunPlus 20 Line product performance at 350mA, T_j=85°C.

COLOR	PEAK WAVELENGTH (nm)		PPF (μmol/s) ^[1] in PAR (400 to 700nm) ^[2]		PPF/W TYPICAL (μmol/J)	PART NUMBER
	MINIMUM	MAXIMUM	MINIMUM	TYPICAL		
Far Red	720	750	1.10	1.37 ^[3]	2.26	L1SP-FRD0002000000
			1.60	1.96	2.95	L1SP-FRD0002F00000
Deep Red	655	670	1.60	1.81	2.65	L1SP-DRD0002000000
			1.70	2.08	2.90	L1SP-DRD0002F00000
Royal Blue	445	455	1.90	2.04	2.11	L1SP-RYL0002000000
			1.90	2.25	2.30	L1SP-RYL0002F00000
Lime	-	-	1.50	1.59	1.66	L1SP-LME0002000000
			1.50	1.62	1.66	L1SP-LME0002F00000
Cool White	-	-	1.40	1.51	1.57	L1SP-CW90002000000
			1.60	1.70	1.73	L1SP-CW90002F00000

LUXEON SunPlus 35 Line product performance at 100mA, T_j=25°C.

COLOR	PEAK WAVELENGTH (nm)		PPF (μmol/s) ^[1] in PAR (400 to 700nm) ^[2]		PPF/W TYPICAL (μmol/J)	PART NUMBER
	MINIMUM	MAXIMUM	MINIMUM	TYPICAL		
Purple (2.5% Blue) ^[4]	-	-	0.45	0.51	1.80	L1SP-PRP0003500000
Purple (12.5% Blue) ^[5]	-	-	0.50	0.58	2.02	L1SP-PRP1003500000
Purple (25% Blue) ^[6]	-	-	0.55	0.63	2.24	L1SP-PRP2003500000
Far Red	720	740	0.30	0.32	1.83	L1SP-FRD00035R0000
Deep Red	650	670	0.40	0.43	2.05	L1SP-DRD00035R0000
Royal Blue	440	455	0.55	0.61	2.00	L1SP-RYL0003500000
Lime	-	-	0.60	0.65	2.13	L1SP-LME0003500000

Notes for Tables 1a and 1b:

- Lumileds maintains a tolerance of ±6.5% on μmol/s for LUXEON SunPlus 20 Line and ±7.5% on μmol/s measurements for LUXEON SunPlus 35 Line.
- PAR is the photosynthetic active radiation from 400 to 700nm.
- Far Red typical PPF is measured from 700 to 800nm.
- PPF in blue spectrum (420–480nm) ranges from 0–5% of total PPF in PAR (400–700nm). Typical PPF in the blue spectrum is 2.5%.
- PPF in blue spectrum (420–480nm) ranges from 10–15% of total PPF in PAR (400–700nm). Typical PPF in the blue spectrum is 12.5%.
- PPF in blue spectrum (420–480nm) ranges from 20–30% of total PPF in PAR (400–700nm). Typical PPF in the blue spectrum is 25%