

HORTICULTURE LEDs

- XLamp® Horizon LEDs: two horticulture beam shapes that improve lighting uniformity & decrease mounting height
- XLamp XP-G3 Photo Red S Line LEDs upgraded with up to 14% higher efficiency
- J Series® JB3030C White LEDs: industry-leading efficiency, footprint compatible with 301B/H, excellent sulfur resistance

April 2024 (FS39R7)

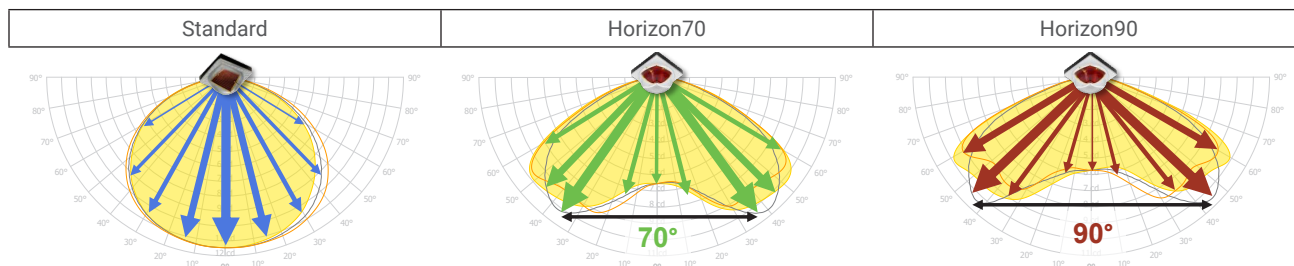
PORTFOLIO OVERVIEW

Color	XLamp® XP LEDs 3.45 x 3.45 mm		XLamp XP Horizon LEDs 3.45 x 3.45 mm		J Series® 5050 LEDs 5.0 x 5.0 mm		J Series 3030 LEDs 3.0 x 3.0 mm		J Series 2835 LEDs 2.8 x 3.5 mm	
Photophyll™ Select		XP-G3 S Line		XP-G3 Horizon						JB2835B G Class
White		XP-G3 S Line		XP-G3 Horizon	 	JR5050C E Class JR5050B K Class		JB3030C E Class		JB2835B G Class
450 nm Royal Blue		XP-G3 S Line		XP-G3 Horizon						JE2835 N Class
PC Mint										JE2835 N Class
660 nm Photo Red	 	XP-G3 S Line XP-E2		XP-G3 Horizon						JE2835 N Class
730 nm Far Red		XP-E2 S Line		XP-E2 Horizon						JE2835 N Class
PC Purple										JE2835 N Class

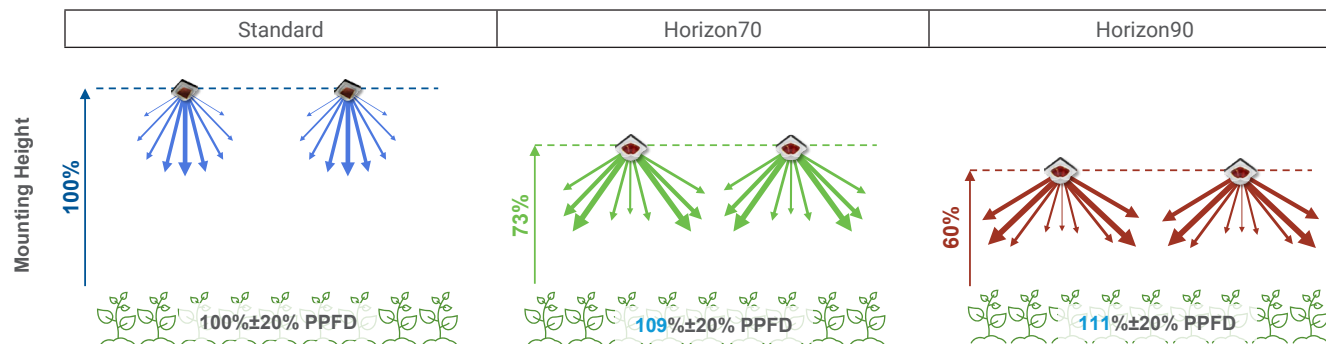
XLAMP® HORIZON LEDs

- Two horticulture beam shapes, available on five LED colors
- Up to 40% lower mounting height than standard LEDs, with up to 10% higher light levels and similar uniformity
- Includes S Line sulfur resistance for the highest possible level of LED corrosion resistance

Horticulture-Optimized Beam Shapes



Value in Vertical Farming

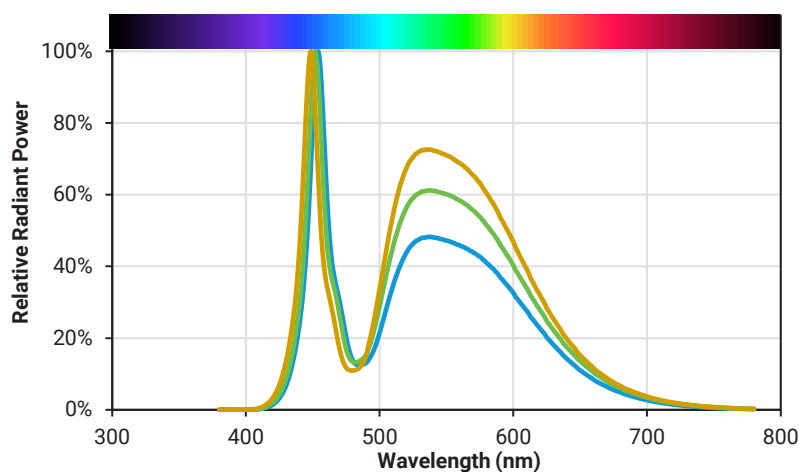


Color	Red PPF %	Green/Blue Ratio	XLamp® LED	Test Current (mA)	Min PPF (μmol/s)	Typ PPF (μmol/s)	PPF/W (μmol/J)	Order Code
White 4000K, 70 CRI	~40%	~2.5	XP-G3 Horizon70	350	2.54	---	2.61	XPGDWT-BW-0000-00ME5
			XP-G3 Horizon90	350	2.54	---	2.61	XPGDWT-BF-0000-00ME5
Photophyll™ Select	20%	2.0	XP-G3 Horizon70	350	2.5	2.6	2.62	XPGDWT-NW-0000-00XPP
			XP-G3 Horizon90	350	2.5	2.6	2.62	XPGDWT-NF-0000-00XPP
		2.5	XP-G3 Horizon70	350	2.5	2.6	2.62	XPGDWT-QW-0000-00XPP
			XP-G3 Horizon90	350	2.5	2.6	2.62	XPGDWT-QF-0000-00XPP
		3.0	XP-G3 Horizon70	350	2.5	2.6	2.62	XPGDWT-XW-0000-00XPP
			XP-G3 Horizon90	350	2.5	2.6	2.62	XPGDWT-XF-0000-00XPP
450 nm Royal Blue	---	---	XP-G3 Horizon70	350	2.77	—	2.83	XPGDRY-LW-0000-00601
			XP-G3 Horizon90	350	2.58	—	2.64	XPGDRY-LF-0000-00501
660 nm Photo Red	~99%	---	XP-G3 Horizon70	350	2.99	3.01	4.6	XPGDPR-LW-0000-00H01
			XP-G3 Horizon90	350	2.85	---	4.36	XPGDPR-LF-0000-00G01
730 nm Far Red	---	---	XP-E2 Horizon70	350	2.49*	2.52*	3.83*	XPEBFR-LW-0000-00C01
			XP-E2 Horizon90	350	2.34*	---	3.56*	XPEBFR-LF-0000-00B01

* All performance figures shown for Tj = 25°C. 730 nm LED flux values shown are photon flux (PF) for the range 380-780 nm.

PHOTOPHYLL™ SELECT LEDs

- Advanced horticulture spectrum optimized for maximum performance with 660 nm Photo Red LEDs
- First LEDs with precise control over the green/blue PPF ratio



Photophyll™
Select LEDs

+

660 nm
Photo Red LED

Blue

- Standard 450 nm peak

Green

- Optimized 500-600 nm content
- Available in 3 precise ratios

Red

- Minimal 20% Red PPF

Horticulture-Specific Metrics

- PPF-based spectral targets
- Aligned to current market requirements

Color	Red PPF %	Green/Blue Ratio	LED	Test Current (mA)	Min PPF (μmol/s)	Typ PPF (μmol/s)	PPF/W (μmol/J)	Order Code
Photophyll Select	20%	2.0	XLamp® XP-G3 S Line	350	2.50	2.60	2.62	XPGDWT-NS-0000-00XPP
			JB2835B 3V G Class	55	0.41	0.44	3.00	JB2835BWT-G-N001A0000-N0000001
		2.5	XLamp XP-G3 S Line	350	2.50	2.60	2.62	XPGDWT-QS-0000-00XPP
			JB2835B 3V G Class	55	0.41	0.44	3.00	JB2835BWT-G-Q001A0000-N0000001
		3.0	XLamp XP-G3 S Line	350	2.50	2.60	2.62	XPGDWT-XS-0000-00XPP
			JB2835B 3V G Class	55	0.41	0.44	3.00	JB2835BWT-G-X001A0000-N0000001

• All performance figures shown for T_j = 25°C

SINGLE COLOR LEDs

Color	Red PPF %	Green/Blue Ratio	LED	Test Current (mA)	Min PPF (μmol/s)	Typ PPF (μmol/s)	PPF/W (μmol/J)	Order Code
450 nm Royal Blue	---	---	XLamp® XP-G3 S Line	350	2.77	---	2.83	XPGDRY-LS-0000-00601
			JE2835 3V N Class	140	---	1.01	2.43	JE2835ARY-N-0002A0000-N0000001
PC Mint			JE2835 3V N Class	140	---	1.00	2.42	JE2835APM-N-0001A0000-N0000001
660 nm Photo Red	~99%	---	XLamp XP-G3 S Line	350	2.99	3.01	4.60	XPGDPR-LS-0000-00H01
			XLamp XP-E2	350	2.71	---	3.71	XPEBPR-L1-0000-00F01
			JE2835 3V N Class	140	---	0.76	2.54	JE2835AHR-N-0001A0000-N0000001
730 nm Far Red	---	---	XLamp XP-E2 S Line	350	2.49*	2.52*	3.83*	XPEBFR-LS-0000-00C01
			JE2835 3V N Class	140	---	0.80*	2.67*	JE2835AFR-N-0001A0000-N0000001
PC Purple	71%	0.63	JE2835 3V N Class	140	---	0.89	2.20	JE2835APP-N-0001A0000-N0000001

* All performance figures shown for T_j = 25°C. 730 nm LED flux values shown are photon flux (PF) for the range 380-780 nm.

WHITE LEDs

Color	Red PPF %	Green/Blue Ratio	LED	Test Current (mA)	Min PPF (μmol/s)	Typ PPF (μmol/s)	PPF/W (μmol/J)	Order Code
5000K 70 CRI	~30%	~2.0	XLamp XP-G3 S Line	350	2.78	---	2.86	XPGDWT-BS-0000-00P3E
			JR5050C 6V E Class	400	5.28	6.37	2.83	JR5050CWT-E-B50EB0000-N0000001
			JR5050B 6V K Class	400	5.28	6.04	2.66	JR5050BWT-K-B50EB0000-N0000001
			JR5050B 30V K Class	80	5.28	6.04	2.66	JR5050BWT-K-B50EK0000-N0000001
			JB3030C 3V E Class	55	0.44	0.47	3.21	JB3030CWT-E-B50EA0000-NZ000001
			JB2835B 3V G Class	55	0.41	0.45	3.05	JB2835BWT-G-B50EAHGRO-N00A0001
3500K 80 CRI	~40%	~3.4	JR5050C 6V E Class	400	4.99	6.21	2.76	JR5050CWT-E-H35EB0000-N0000001
			JR5050B 6V K Class	400	4.99	5.91	2.61	JR5050BWT-K-H35EB0000-N0000001
			JR5050B 30V K Class	80	4.99	5.91	2.61	JR5050BWT-K-H35EK0000-N0000001
			JB3030C 3V E Class	55	0.41	0.46	3.15	JB3030CWT-E-H35EA0000-NZ000001
			JB2835B 3V G Class	55	0.41	0.44	3.03	JB2835BWT-G-H35EAHGRO-N00A0001

* All performance figures shown for T_j = 25°C

* More CCT & CRI options are available for the white LEDs. Please see the product data sheets for more detail.