

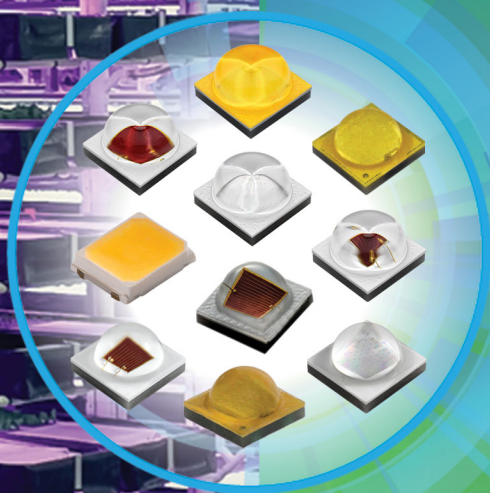
Horticulture LEDs

Product Guide

XLamp® Horizon

XLamp® S Line

Photophyll™ Select










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PRODUCT PORTFOLIO OVERVIEW

LED	XLamp XP	XLamp XP Horizon	J Series® 5050	J Series 3030	J Series 2835
Footprint (mm)	3.45 x 3.45	3.45 x 3.45	5.0 x 5.0	3.0 x 3.0	2.8 x 3.5
Max Power	6W	6W	5W	1W	1W
Photophyll™ Select	 XP-G3 S Line	 XP-G3 Horizon		 JB3030C E Class	 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-L S Line  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® XP-G3 Horizon70 LEDs

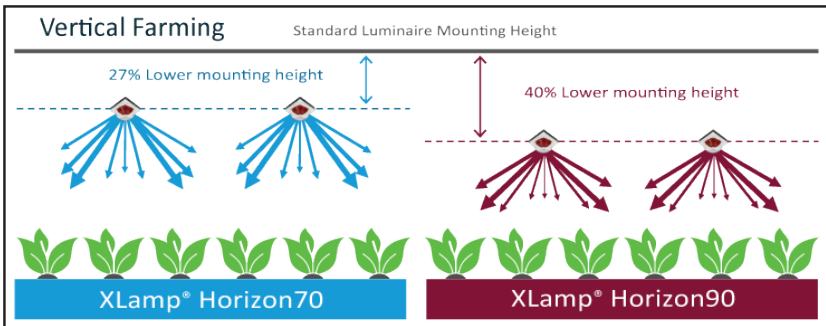
- Peak light output spaced 70° apart
- Compatible with existing batwing optic shapes
- S Line technology for the best level of LED corrosion resistance

XLamp® XP-G3 Horizon90 LEDs

- Peak light output spaced 90° apart
- Enables lowest luminaire mounting height and increases uniformity
- S Line technology for the best level of LED corrosion resistance

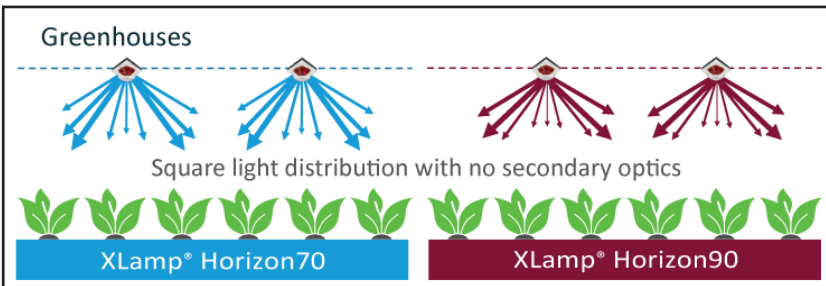
Increases Plant Density for Vertical Farms

- Can be placed up to 40% closer to plants than standard LEDs, with up to 10% higher light levels and similar uniformity
- More plants can be grown in a rack footprint
- Lower costs, higher revenues

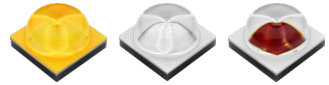


Increases Uniformity & Efficiency for Greenhouses

- Square illuminance pattern
- Allows use of more efficient optics



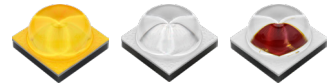
XLamp® XP-G3 Horizon70 LEDs



* All performance figures shown for $T_j = 25^\circ\text{C}$, 350 mA

Color	Red PPF %	Green/Blue Ratio	Min PPF ($\mu\text{mol/s}$)	Typ PPF ($\mu\text{mol/s}$)	PPF/W ($\mu\text{mol/J}$)	Order Code
White 4000K, 70 CRI	~40%	~2.5	2.54	---	2.61	XPGDWT-BW-0000-00ME5
Photophyll™ Select	20%	2.0	2.5	2.6	2.62	XPGDWT-NW-0000-00XPP
		2.5	2.5	2.6	2.62	XPGDWT-QW-0000-00XPP
		3.0	2.5	2.6	2.62	XPGDWT-XW-0000-00XPP
450 nm Royal Blue	---	---	2.77	-	2.83	XPGDRY-LW-0000-00G01
660 nm Photo Red	~99%	---	2.99	3.01	4.6	XPGDPR-LW-0000-00H01

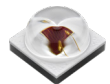
XLamp XP-G3 Horizon90 LEDs



* All performance figures shown for $T_j = 25^\circ\text{C}$, 350 mA

Color	Red PPF %	Green/Blue Ratio	Min PPF ($\mu\text{mol/s}$)	Typ PPF ($\mu\text{mol/s}$)	PPF/W ($\mu\text{mol/J}$)	Order Code
White 4000K, 70 CRI	~40%	~2.5	2.54	---	2.61	XPGDWT-BF-0000-00ME5
Photophyll™ Select	20%	2.0	2.5	2.6	2.62	XPGDWT-NF-0000-00XPP
		2.5	2.5	2.6	2.62	XPGDWT-QF-0000-00XPP
		3.0	2.5	2.6	2.62	XPGDWT-XF-0000-00XPP
450 nm Royal Blue	---	---	2.58	-	2.64	XPGDRY-LF-0000-00G01
660 nm Photo Red	~99%	---	2.85	---	4.36	XPGDPR-LF-0000-00G01

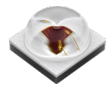
XLamp XP-E2 Horizon70 LEDs



* All performance figures shown for $T_j = 25^\circ\text{C}$, 350 mA. PF range 380-780 nm,

Color	Red PPF %	Green/Blue Ratio	Min PF ($\mu\text{mol/s}$)	Typ PF ($\mu\text{mol/s}$)	PF/W ($\mu\text{mol/J}$)	Order Code
730 nm Far Red	---	---	2.49	2.52	3.83	XPEBFR-LW-0000-00C01

XLamp XP-E2 Horizon90 LEDs

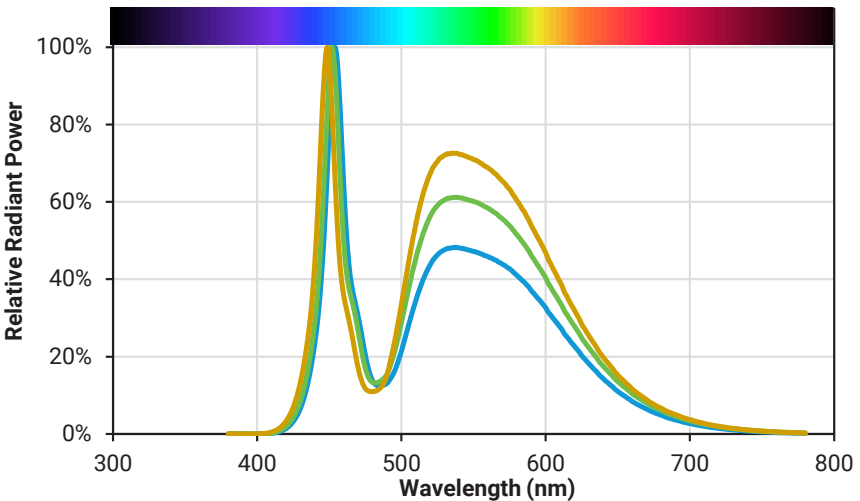
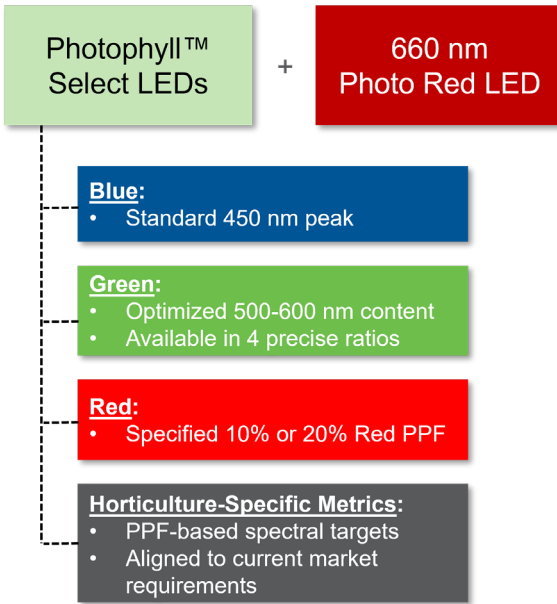


* All performance figures shown for $T_j = 25^\circ\text{C}$, 350 mA. PF range 380-780 nm,

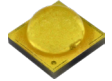
Color	Red PPF %	Green/Blue Ratio	Min PF ($\mu\text{mol/s}$)	Typ PF ($\mu\text{mol/s}$)	PF/W ($\mu\text{mol/J}$)	Order Code
730 nm Far Red	---	---	2.34	---	3.56	XPEBFR-LF-0000-00B01

Photophyll™ Select LEDs

- First LEDs with precise control over the green/blue PPF ratio
- Industry's first LEDs entirely characterized in horticulture metrics
- Enables efficiency upgrade of two-channel (white + red) horticulture luminaires by 6% or LED count reduction of 33% for the same performance



XLamp® XP-G3 Photophyll Select LEDs (Standard)



- S Line technology for the best level of LED corrosion resistance

Color	Red PPF %	Green/Blue Ratio	Min PPF (μmol/s)	Typ PPF (μmol/s)	PPF/W (μmol/J)	Order Code
Photophyll™ Select	20%	2.0	2.5	2.6	2.62	XPGDWT-NS-0000-00XPP
		2.5	2.5	2.6	2.62	XPGDWT-QS-0000-00XPP
		3.0	2.5	2.6	2.62	XPGDWT-XS-0000-00XPP

* All performance figures shown for Tj = 25°C, 350 mA

XLamp XP-G3 Photophyll Select LEDs (Horizon)



- Compatible with existing batwing optic shapes (Horizon70)
- Enables lowest luminaire mounting height and increases uniformity (Horizon90)
- S Line technology for the best level of LED corrosion resistance

Color	Red PPF %	Green/Blue Ratio	Min PPF (μmol/s)	Typ PPF (μmol/s)	PPF/W (μmol/J)	Order Code
Photophyll™ Select	20%	2.0	2.5	2.6	2.62	XPGDWT-NW-0000-00XPP (70) XPGDWT-NF-0000-00XPP (90)
		2.5	2.5	2.6	2.62	XPGDWT-QW-0000-00XPP (70) XPGDWT-QF-0000-00XPP (90)
		3.0	2.5	2.6	2.62	XPGDWT-XW-0000-00XPP (70) XPGDWT-XF-0000-00XPP (90)

* All performance figures shown for Tj = 25°C, 350 mA

J Series® JB3030C 3V E Class Photophyll Select LEDs



- Footprint compatible with 301B/H
- Industry-leading mid-power efficiency with excellent sulfur resistance

Color	Red PPF %	Green/Blue Ratio	Min PPF (μmol/s)	Typ PPF (μmol/s)	PPF/W (μmol/J)	Order Code
Photophyll™ Select	10%	1.0	0.41	0.44	3.00	JB3030CWT-E-G001A0000-N0000001

* All performance figures shown for Tj = 25°C, 55 mA

J Series® 2835 3V G Class Photophyll Select LEDs



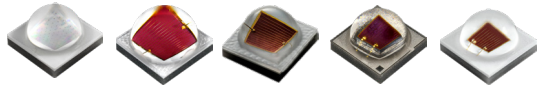
- Industry's highest efficacy 2835 platform

Color	Red PPF %	Green/Blue Ratio	Min PPF (μmol/s)	Typ PPF (μmol/s)	PPF/W (μmol/J)	Order Code
Photophyll™ Select	20%	2.0	0.41	0.44	3.00	JB2835BWT-G-N001A0000-N0000001
		2.5	0.41	0.44	3.00	JB2835BWT-G-Q001A0000-N0000001
		3.0	0.41	0.44	3.00	JB2835BWT-G-X001A0000-N0000001

* All performance figures shown for Tj = 25°C, 55 mA



XLamp® XP Family LEDs



- XP-L Photo Red S Line delivers up to 6% higher efficiency in the XP footprint

Color	Red PPF %	Green/Blue Ratio	Min PPF (μmol/s)	Typ PPF (μmol/s)	PPF/W (μmol/J)	Order Code
450 nm Royal Blue	---	---	2.77	---	2.83	XPGDRY-LS-0000-00601*
660 nm Photo Red	~99%	---	2.99	3.09	4.79	XPLAPR-LS-0000-00H01*
			2.99	3.01	4.60	XPGDPR-LS-0000-00H01*
			2.71	---	3.71	XPEBPR-L1-0000-00F01
730 nm Far Red	---	---	2.49*	2.52*	3.83*	XPEBFR-LS-0000-00C01*

* Performance shown for T_j = 25°C, 350 mA. Far Red PF range 380-780 nm.

* S Line technology for best LED corrosion resistance

J Series® 2835 3V N Class Color LEDs



- Available in 15 different colors with leading efficacy

Color	Red PPF %	Green/Blue Ratio	Min PPF (μmol/s)	Typ PPF (μmol/s)	PPF/W (μmol/J)	Order Code
450 nm Royal Blue	---	---	---	1.01	2.43	JE2835ARY-N-0002A0000-N0000001
PC Mint	24%	5.82	---	1.00	2.42	JE2835APM-N-0001A0000-N0000001
660 nm Photo Red	~99%	---	---	0.76	2.54	JE2835AHR-N-0001A0000-N0000001
730 nm Far Red	---	---	---	0.80*	2.67*	JE2835AFR-N-0001A0000-N0000001
PC Purple	71%	0.63	---	0.89	2.20	JE2835APP-N-0001A0000-N0000001

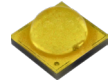
* Please see the [J Series 2835 Color data sheet](#) for information on the other available colors

* Performance shown for T_j = 25°C, 140 mA. Far Red PF range 380-780 nm.

WHITE LEDS



XLamp® XP-G3 White S Line LEDs

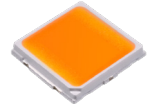


- S Line technology for best LED corrosion resistance
- Leading ceramic high-power white LED efficacy

Color	Red PPF %	Green/Blue Ratio	Min PPF (μmol/s)	Typ PPF (μmol/s)	PPF/W (μmol/J)	Order Code
5000K, 70 CRI	~30%	~2.0	2.78	---	2.86	XPGDWT-BS-0000-00P3E

* Performance shown for T_j = 25°C, 350 mA . See [data sheet](#) for all CCT/CRI's.

J Series® JR5050C E Class White LEDs



- Industry's highest efficacy high power LED
- Enables up to 40% system cost savings

Color	Red PPF %	Green/Blue Ratio	Min PPF (μmol/s)	Typ PPF (μmol/s)	PPF/W (μmol/J)	Order Code
5000K, 70 CRI	~30%	~2.0	5.28	6.37	2.83	JR5050CWT-E-B50EB0000-N0000001
3500K, 80 CRI	~40%	~3.4	4.99	6.21	2.76	JR5050CWT-E-H35EB0000-N0000001

* Performance shown for T_j = 25°C, 400 mA (6V) . See [data sheet](#) for all CCT/CRI's.

J Series JR5050B K Class White LEDs



- Best-in-class efficacy available in 6V & 30V options

Color	Red PPF %	Green/Blue Ratio	Min PPF (μmol/s)	Typ PPF (μmol/s)	PPF/W (μmol/J)	Order Code
5000K, 70 CRI	~30%	~2.0	5.28	6.04	2.66	JR5050BWT-K-B50EB0000-N0000001 JR5050BWT-K-B50EK0000-N0000001
3500K, 80 CRI	~40%	~3.4	4.99	5.91	2.61	JR5050BWT-K-H35EB0000-N0000001 JR5050BWT-K-H35EK0000-N0000001

* Performance shown for T_j = 25°C, 400 mA (6V - B), 80 mA (30V - K). See [data sheet](#) for all CCT/CRI's.

J Series JB3030C E Class White LEDs



- Industry-leading 3030 efficiency (up to 3.33 PPF/W typical)
- Footprint compatible with 301B/H

Color	Red PPF %	Green/Blue Ratio	Min PPF (μmol/s)	Typ PPF (μmol/s)	PPF/W (μmol/J)	Order Code
5000K, 70 CRI	~30%	~2.0	0.44	0.47	3.21	JB3030CWT-E-B50EA0000-NZ000001
3500K, 80 CRI	~40%	~3.4	0.41	0.46	3.15	JB3030CWT-E-H35EA0000-NZ000001

* Performance shown for T_j = 25°C, 55 mA . See [data sheet](#) for all CCT/CRI's.

J Series JB2835B G Class White LEDs



- Industry's highest efficacy 2835 platform

Color	Red PPF %	Green/Blue Ratio	Min PPF (μmol/s)	Typ PPF (μmol/s)	PPF/W (μmol/J)	Order Code
5000K, 70 CRI	~30%	~2.0	0.41	0.45	3.05	JB2835BWT-G-B50EAHGRO-N00A0001
3500K, 80 CRI	~40%	~3.4	0.41	0.44	3.03	JB2835BWT-G-H35EAHGRO-N00A0001

* Performance shown for T_j = 25°C, 55 mA . See [data sheet](#) for all CCT/CRI's.



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