

TotalGrow Photoperiodic Lighting

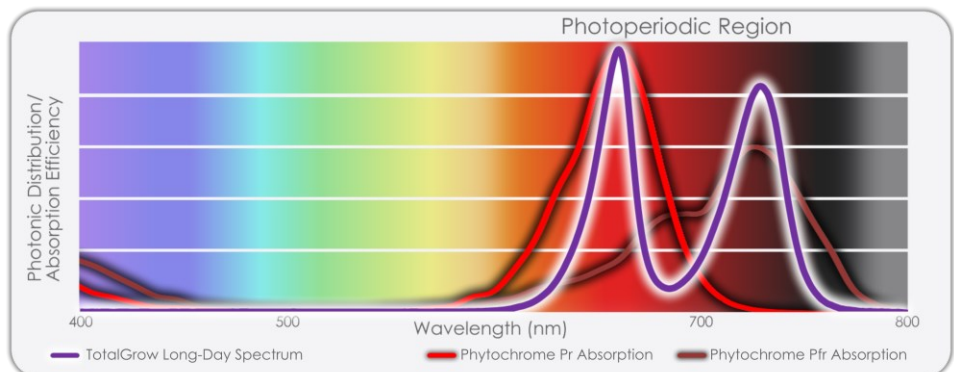


The most efficient, effective, and targeted solutions to control the timing of flowering from greenhouses to off-grid fields.

- Perfect spectrum to ensure long-day responses with night interruption/day length extension
- Rugged, long-lasting, low-power, weather-resistant designs without insect attraction
- Optimized optical patterns and outputs for any application

The Science of Photoperiodic Lighting

- Long or short day perception often triggers or prevents key behaviors, especially flowering vs. vegetative growth.
- Long days require the appropriate lighting spectrum extending the day before sunrise/after sunset or interrupting the night, e.g. 10pm – 2am, to keep dark periods less than 10 hours.
- The spectrum must properly activate the photoreceptor phytochrome with red (esp. 620-690nm) and far-red (esp. 690-750nm) light as shown above. A ratio of approx. 1:1 for red : far-red light is the only universally effective ratio for photoperiodic lighting.¹
- Excessive far-red induces stretching and generally lower quality crops.²



contact: info@totalgrowlight.com

¹ Craig, D. S., & Runkle, E. S. (2013). A Moderate to High Red to Far-red Light Ratio from Light-emitting Diodes Controls Flowering of Short-day Plants. *JASHS*, 138(3), 167-172.
² Cerdán, P. D., & Chory, J. (2003). Regulation of flowering time by light quality. *Nature*, 423(6942), 881-885.

Specifications:

Product:	Pure Flowering Lamp	Long-Day Field Light	60W Solar Long-Day Light	120W Solar Long-Day Light
Product Type	Greenhouse String Light Bulb (E26)	Field AC-Powered Light Fixture	Solar-Powered Light Fixture	Solar-Powered Light Fixture
Product Number	TG1B-3A-1104	TG18B-M0-1104	TG6B-S95-1104	TG12B-S145-1104
Power Consumption (W)	17	180	60	120
Output (μmol/s)	34	400	180	360
Efficacy (μmol/J)	2.0	2.2	3.0	3.0
Typical Small-Plant Coverage Per Light	15 x 15 ft (4.5 x 4.5 m)	50 x 50 ft (15 x 15m)	35 x 35 ft (10 x 10 m)	45 x 45 ft (14 x 14m)
Typical Small-Plant Height Over Canopy	7-10 ft (2-3 m)	20 ft (6 m)	14 ft (4.5 m)	18 ft (6 m)
Typical Large-Plant Coverage Per Light	10 x 10 ft (3 x 3 m)	40 x 40 ft (12 x 12 m)	25 x 25 ft (8 x 8 m)	36 x 36 ft (11 x 11 m)
Typical Large-Plant Height Over Canopy	5-7 ft (1.5-2 m)	16 ft (5 m)	10 ft (3.5 m)	15 ft (5 m)
Length x Width x Height	5 x 5 x 5 in (13 x 13 x 13 cm)	28 x 11 x 3 in. (70 x 27 x 8 cm)	40 x 20 x 12 in. (101 x 52 x 31 cm)	55 x 21 x 12 in. (140 x 55 x 31 cm)
Weight	1 lb. (0.4 kg)	12 lbs. (5.5 kg)	39 lbs. (17.5 kg)	57 lbs. (26 kg)
Input Voltage	100-240 VAC	100-305 VAC	12.8 VDC (battery)	25.6 VDC (battery)
Input Frequency	50-60 Hz	50-60 Hz	NA	NA
Power Factor	≥ 0.9	≥ 0.9	NA	NA
Dimming	None	0-10V	None	None
Operating Temperature	-5°F to 100°F (-20°C to 40°C)	-40°F to 140°F (-40°C to 60°C)	-5°F to 120°F (-20°C to 50°C)	-5°F to 120°F (-20°C to 50°C)
Projected Service Life / Warranty	50,000 hours / 5-year	50,000 hours / 3-year	50,000 hours / 3-year	50,000 hours / 3-year
Waterproof	IP65	IP65	IP65	IP65
Product Image				

Contact the lighting experts at TotalGrow for a free customized light plan to optimize your grow!