

# LED

Lamp for Plant Growth

**PLANTFLEC / SUNRAY LIGHT**

NIPPON MEDICAL & CHEMICAL INSTRUMENTS CO.,LTD.

## Efficient Lighting, Sustainable Growth!



- Reduced risk of thermal degradation.
- Long service life of 30,000 hours enables extended use.
- Saves electricity costs (reduces running costs).
- Lower heat emission from the unit helps reduce the air-conditioning load in the installation area.

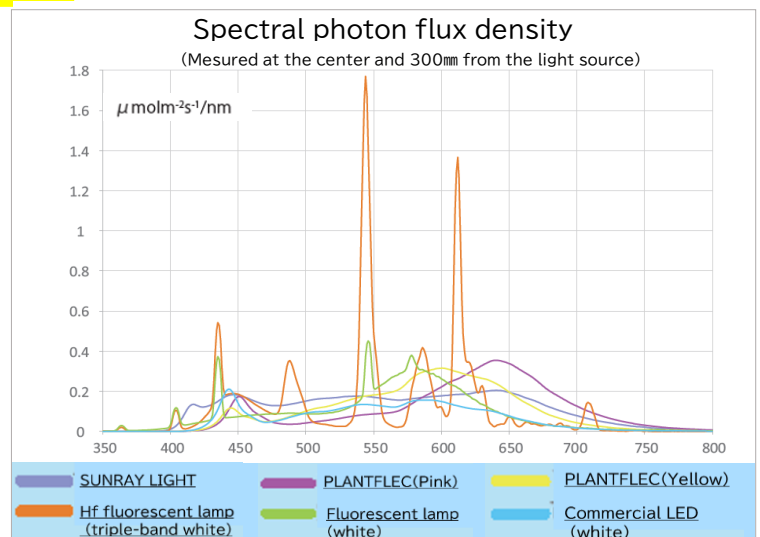
## Extensive Growth Data!



- Reliable cultivation data based on joint research with universities.
- Provision of research data and optimal lighting environments to meet your needs.

## Emission Spectrum

This graph compares the spectral photon flux density ( $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}/\text{nm}$ ) of each light source. In plant cultivation, both light quality (spectral distribution) and quantity (PPFD) significantly affect growth rate and product quality. Since LED light sources differ greatly in wavelength distribution depending on the type, please consider LEDs with proven performance for plant growth applications.





## Straight Tube LED Lamp with Sunlight-like Spectrum

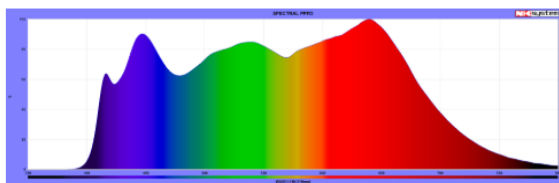
# SUNRAY LIGHT

**POINT**

### Natural color rendering LEDs.

SUNRAY LIGHT optimizes PLANTFLEC wavelengths to closely match natural sunlight. This design suppresses color bias while covering a broad spectrum. Proven performance across research fields including Arabidopsis thaliana and rice.

LED Spectrums



Model	PF10-S6WT8-S1	PF15-S8WT8-S1	PF20-S12WT8-S1	PF40-S22WT8-S1
Lamp type	10W	15W	20W	40W
Lamp surface	Transparent plastic cover			
LED radiation angle (°)	120			
Tube diameter [mm]	30.3 × 34.3			
Length (mm)	330	436	580	1198
LED chips	36 pieces	48 pieces	65 pieces	132 pieces
Weight (g)	130	170	200	380
Tube base	G13			
Input current (A) max at 100V	0.06	0.08	0.12	0.22
Power consumption(W) max at 100V	6	8	12	22
Total luminous flux (lm)	530	720	870	1,500
Color temp. (K)	5,600 ± 200			
Color rendering index (Ra)	90			
Environmental temperature (°C)	-10~40			
Lifetime (h)	Approx. 30,000			
Power source	AC 100 to 240V 50/60Hz			

\*A power cord is needed if Sunray light is used by itself. \*Feel free to consult us regarding the installation and brackets.  
\*Some plants are not suitable for Sunray light.\*These models are non-dimmable. Please ask us if you need dimmable models.



## Straight tube LED lamp for plant growth

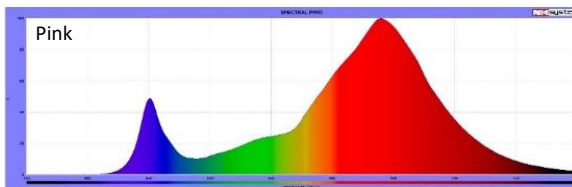
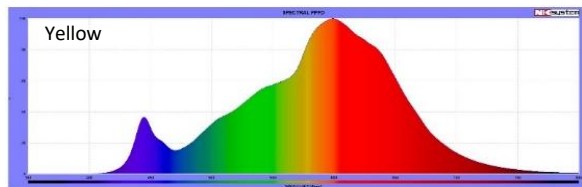
# PLANTFLEC

### Available in YELLOW and PINK colors!

PLANTFLEC containing wavelengths essential for photosynthesis. Proven results in Arabidopsis, rice, and various research applications.

**POINT**

LED Spectrums



Model	PF10-S4WT8-D1	PF15-S5WT8-D1	PF20-S9WT8-D1	PF40-S18WT8-D1	PF10-S4WT8-P1	PF15-S5WT8-P1	PF20-S9WT8-P1	PF40-S18WT8-P1
Lamp type	10W	15W	20W	40W	10W	15W	20W	40W
Lamp surface	Transparent plastic cover							
LED radiation angle (°)	120							
Tube diameter [mm]	30.3 × 34.3							
Length (mm)	330	436	580	1,198	330	436	580	1,198
LED chips	120	160	210	392	120	160	210	392
Weight ( g )	G13							
Tube base	IP20							
Input current (A) max at 100V	0.06	0.09	0.1	0.18	0.06	0.09	0.09	0.18
Power consumption(W) max at 100V	4	5	9	18	4	5	9	18
Total luminous flux (lm)	260	360	650	1,400	160	233	750	1,000
Color temp. (K)	3,000 ± 100				2,100 ± 100			
Color rendering index (Ra)	80							
Environmental temperature (°C)	-20 to 40		-10 to 40		-20 to 40		-10~40	
Lifetime (h)	Approximately 30,000							
Power source	AC 100 to 240 V 50/60Hz							

\*A power cord is needed if PlantFlec is used by itself. \*Feel free to consult us regarding the installation and brackets.  
\*Some plants are not suitable for PlantFlec. \*These models are non-dimmable. Please ask us if you need dimmable models.

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