

# PowerLine™ 400 AC LED Tape Light



PowerLine offers the highest quality ETL Listed driverless LED lighting, with the greatest selection of options on the market today. The Alloy LED manufacturing facility in California offers built to order, ETL listed custom lengths of PowerLine with a lightning-fast lead time.

- Custom ETL Listed Lengths
- Available with Either Plug-In (UL 2388) or Hard-Wire (UL 1598) Configurations
- Cut Points Every 4 Inches
- Up to 383 Lumens / Foot



## TECHNICAL INFORMATION

<b>Stocked Color Temperature*</b>	2700K, 3000K, 4200K
<b>Power Consumption per foot</b>	4W/FT, 35.8mA (4W/120V/0.93 Power factor=35.8ma )
<b>Input Voltage</b>	120V AC
<b>Lumens Per Foot (4200K)</b>	383
<b>Spool Length</b>	164 ft.
<b>Tape Dimensions (W x H)</b>	0.6 x 0.23 in.
<b>End Cap Dimensions (L x W x H)</b>	0.69 x 0.69 x 0.44 in.
<b>Maximum Run Length</b>	164 ft.
<b>Dimmable</b>	Yes (Down to 25%)
<b>Beam Angle</b>	120°

<b>Cut Points</b>	Every 4 in.
<b>Power Cable Length</b>	2 ft. / 8 ft.
<b>Diode Type</b>	3056
<b>Diodes per foot</b>	18
<b>Diode Spacing</b>	0.68 in.
<b>Location</b>	Dry / Wet (IP66)**
<b>Operating Temperature</b>	<194° F / 90° C
<b>Ambient Temperature</b>	-4° F to 107° F / -20° C to 42° C
<b>Certifications / Standards</b>	ETL Listed, UL 2388 (plug-in), UL 1598 (hard-wire), RoHS
<b>Warranty</b>	5 Years Indoor, 3 Years Outdoor

\* In addition to stocked colors, a wide variety of Color Temperatures are also available by special order. Please call or email to order.

\*\* PowerLine 400 is only rated for wet location if ordered through our customization department. Wet location is achieved with factory-sealed connections.

## ETL LISTED CUSTOM LENGTHS

Use the SKU builder to fill in the CCT (Color Temperature.) and length (in feet/inches).

### Plug-in SKU Builder:

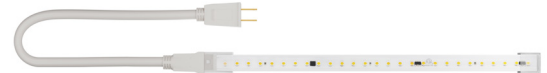
AL - 11 - 06 - A - [CCT] - [LENGTH] - [INCHES]

(Choice of Color Temperature.)      (Choice of length 1 ft. increments)      (Choice of length 4 in. increments)

27 = 2700K      001-164 ft.      04 = 4 inches

30 = 3000K           08 = 8 inches

42 = 4200K



### Hardwire SKU Builder:

AL - 11 - 06 - B - [CCT] - [LENGTH] - [INCHES]



### Examples:

AL - 11 - 06 - A - 27 - 064  
Plug-in PowerLine 400 AC Tape - 2700K - 64 feet

AL - 11 - 06 - B - 30 - 110 - 08  
Hard-wire PowerLine 400 AC Tape - 3000K - 110 feet , 8 inches

## ALLOY LED LIGHT LAB™ SPECIFICATIONS

Maximum Run = 164'

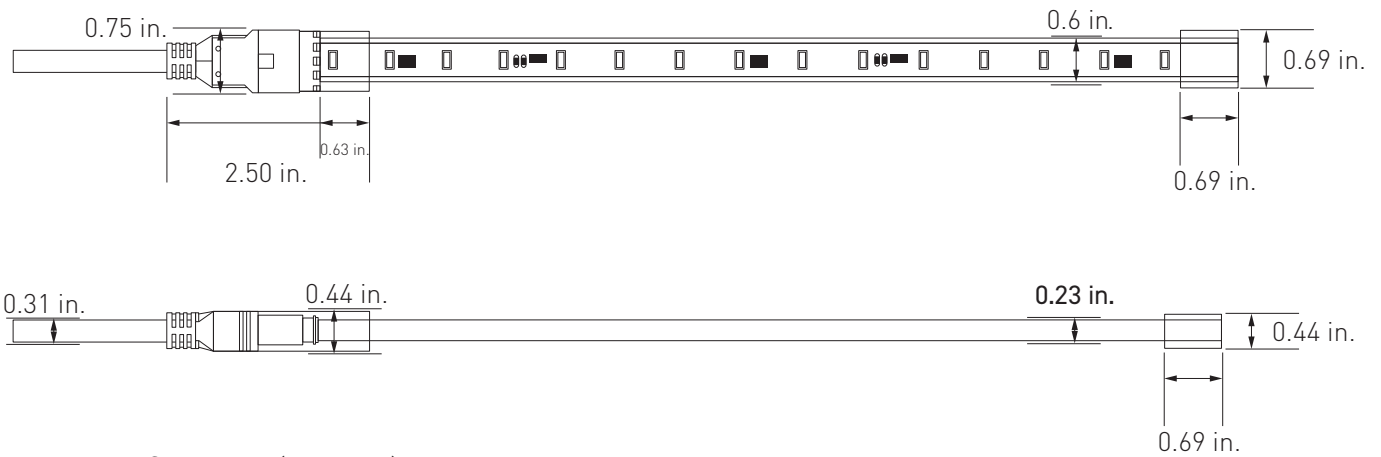
Item Number	Voltage	Color Temperature*	CRI	R9 Value	R13 Value	TM-30	CQS	Lumens per foot
AL-11-06-A-27-164	120V AC	2700K	93	66	93	92	91	357
AL-11-06-A-30-164	120V AC	3000K	92	68	92	90	91	374
AL-11-06-A-42-164	120V AC	4200K	94	71	96	89	92	383



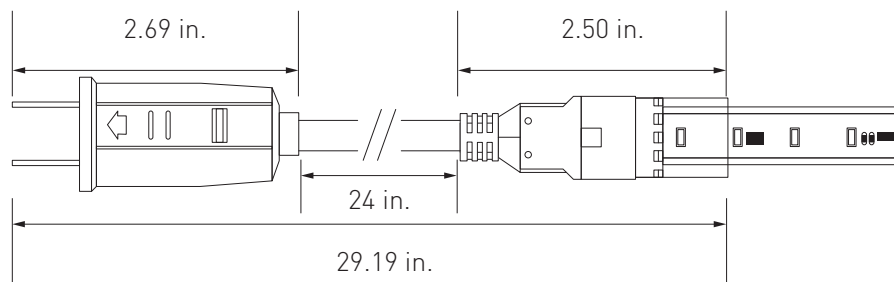
NOTE: ETL listing is voided when tape is cut in the field.

## TAPE LIGHT DIMENSION DIAGRAMS

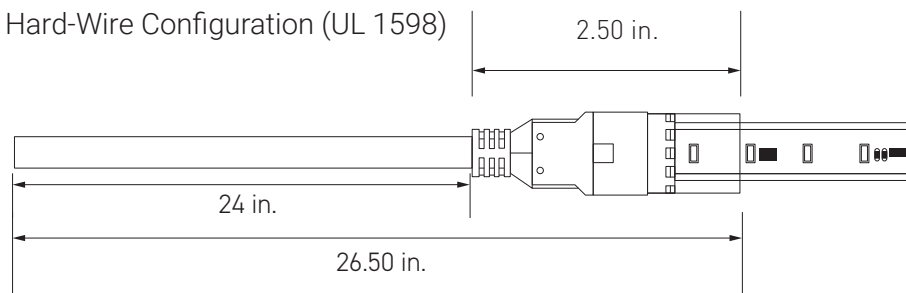
### LED Strip with Power Connector and End Cap



### Plug-In Configuration (UL 2388)



### Hard-Wire Configuration (UL 1598)

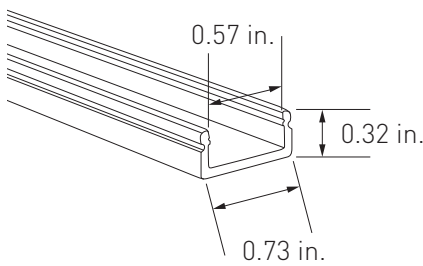


NOTE: Power cords are available in length up to 96 in. but additional cost apply.

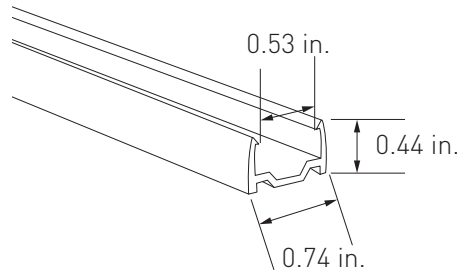
## ACCESSORIES (SOLD SEPARATELY)

### Mounting Accessories

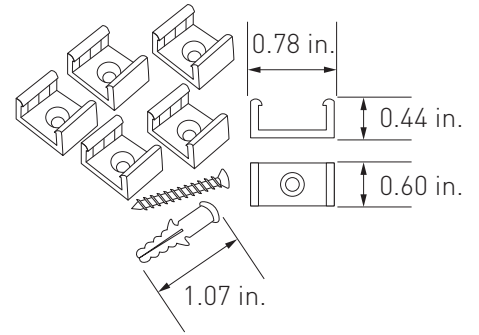
*PowerLine Tape Light End Caps do not fit in any of the mounting tracks or channel kits.*



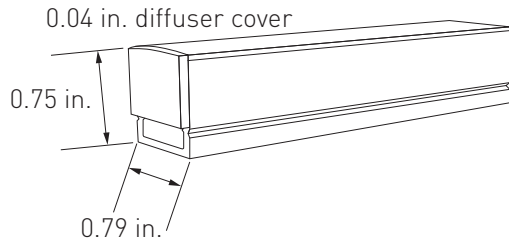
**Universal Aluminum Mounting Track  
(Screws not included)**  
AL-11-99-9923-AL (4 ft. - Aluminum)



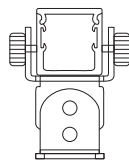
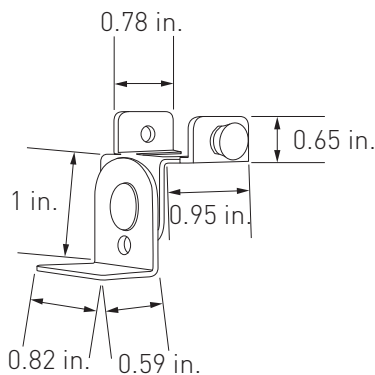
**Universal Plastic Mounting Track  
(Screws not included)**  
AL-11-99-9930 (4 ft. - Plastic)



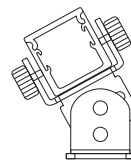
**Universal Plastic Mounting Clips/Screws  
(Attach directly to PowerLine)**  
**White - Pack of 5**  
AL-11-99-9902-MC (5-pack)  
Includes 5 screws (1 in.) and anchors



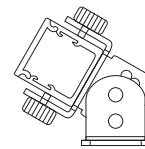
**Universal Surface-Mount Channel Kit - 4ft.**  
**1 Aluminum Channel, 1 Premium Diffuser Cover 1mm height, 2 End Caps, 4 Metal Mounting Clips/Screws**  
AL-11-99-9924-KIT



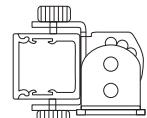
0°



30°



60°



90°

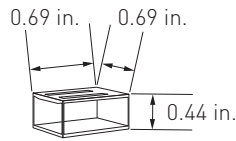
**Universal Adjustable Channel Mounting Bracket/Screws**  
*Compatible with Surface Mount Channel*

AL-11-99-9986  
Use 2 every 4 ft.

NOTE: The tape light end cap does not fit in the track.

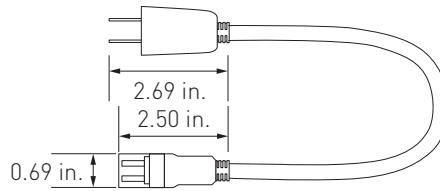
## ACCESSORIES (SOLD SEPARATELY)

### Additional Accessories



#### Universal End Cap

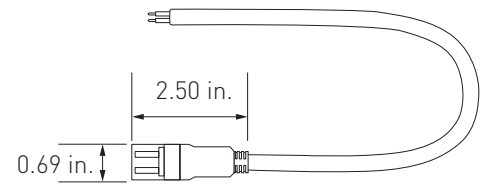
AL-11-99-9902-EC (Clear)



#### Plug-In Universal Power Cable\*

AL-11-99-9902-USD-24IN (24 in. - White)  
AL-11-99-9902-USD-96IN (96 in. - White)

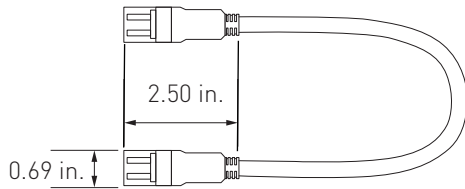
*\*When measuring your job, please add 5.19 in. to your chosen length (24 in. or 96 in.) to account for the plugs.*



#### Hard-Wire Universal Power Feed Splice Connector\*

AL-11-99-9902-SC-24IN (24 in. - White)  
AL-11-99-9902-SC-96IN (96 in. - White)

*\*When measuring your job, please add 2.50 in. to your chosen length (24 in. or 96 in.) to account for the plugs.*



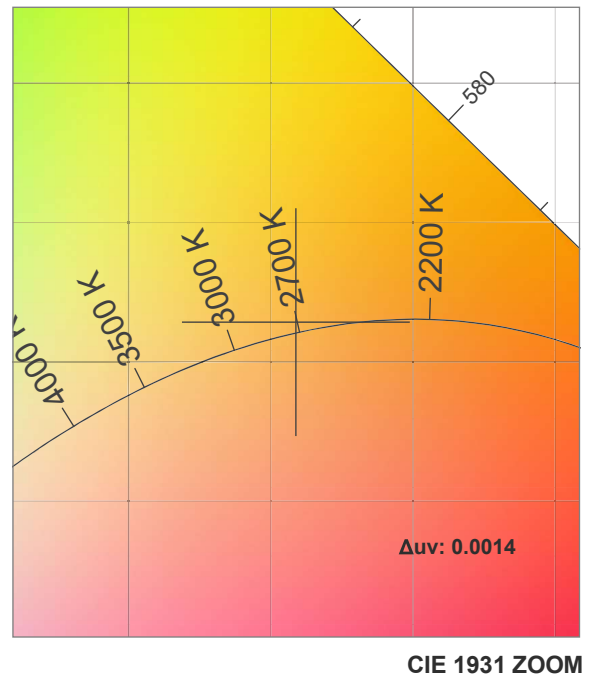
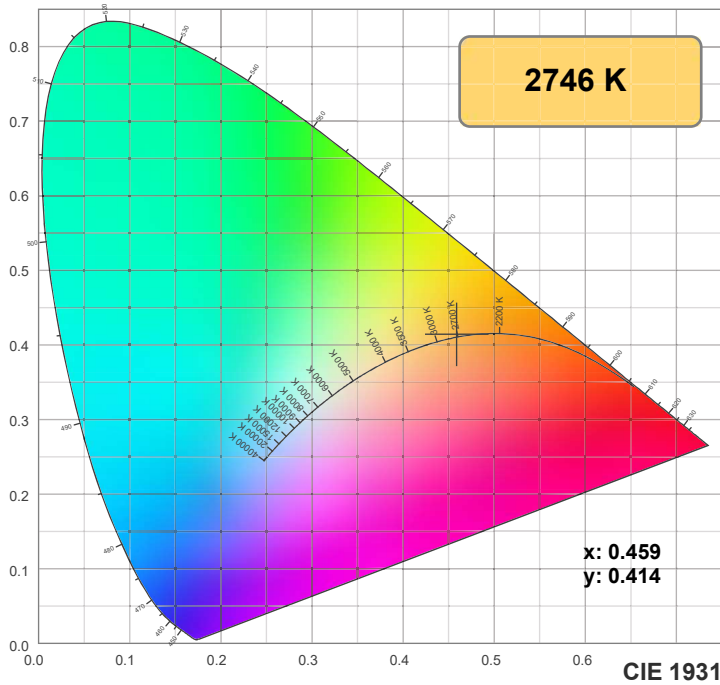
#### Universal Jumper Cable\*

AL-11-99-9902-EXT-6IN (6 in. - White)  
AL-11-99-9902-EXT-24IN (24 in. - White)

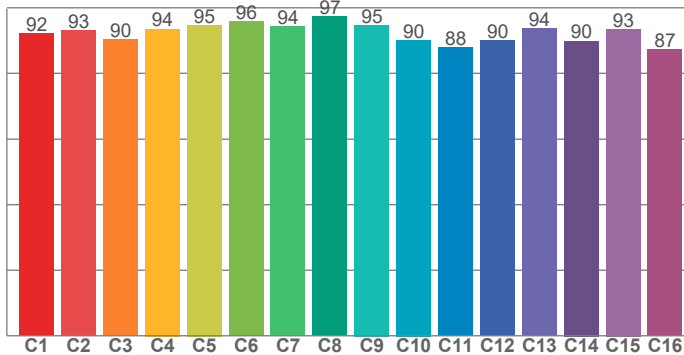
*\*When measuring your job, please add 5 in. to your chosen length (6 in. or 24 in.) to account for the plugs.*

Note: specifications are representative of the diode type and not a particular tape light article.

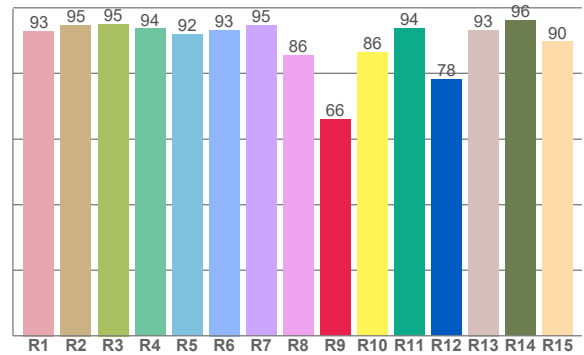
2700K



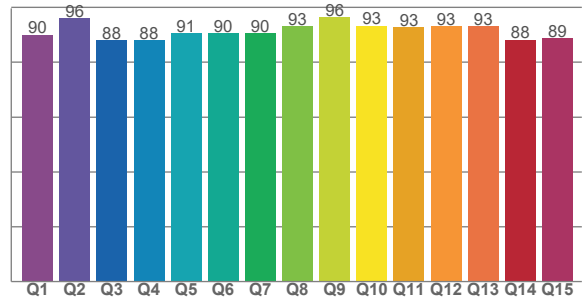
TM30: 92.2



CRI: 92.7 (R1-R8)



CQS: 90.9



CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
92.9	94.7	95.0	93.6	91.8	93.1	94.7	85.6	66.0	86.4	93.7	78.1	93.2	96.2	89.6

TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
92.0	93.1	90.4	93.5	94.7	95.8	94.2	97.3	94.7	90.1	87.8	90.0	93.6	89.8	93.5	87.4

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89.9	96.0	87.8	87.9	90.5	90.5	90.4	92.9	96.2	93.1	92.6	92.8	93.0	88.1	88.8

Color parameters

Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
2746 K	92.7	66.0	92.2	99.5	90.9	0.459	0.414	0.260	0.352	0.0014

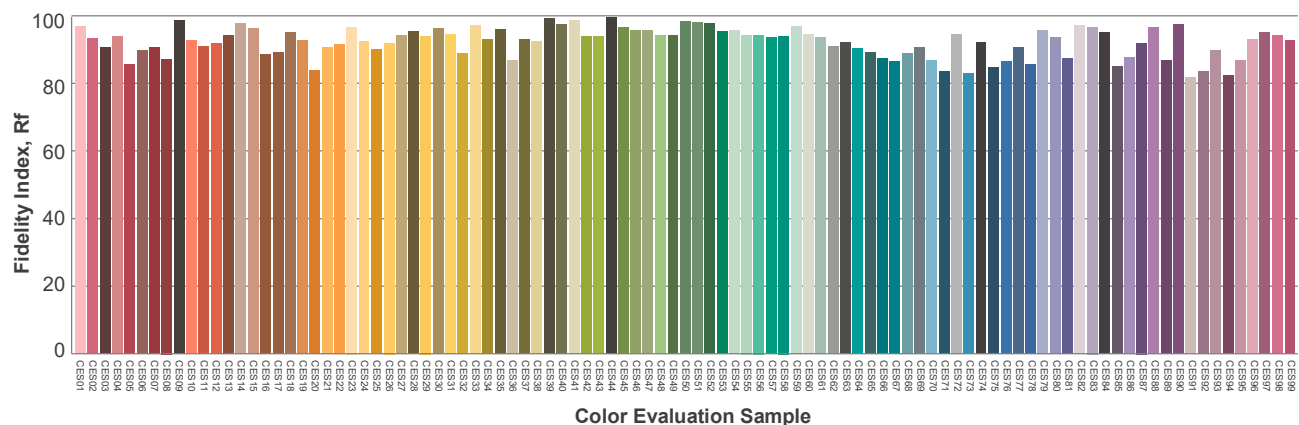
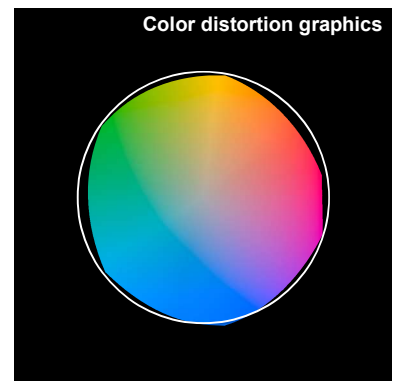
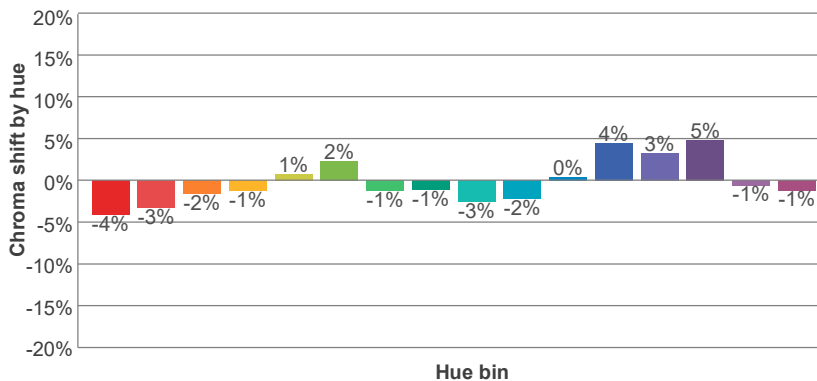
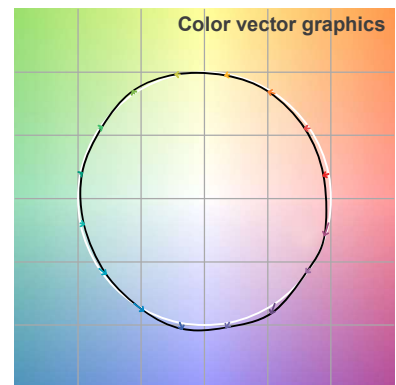
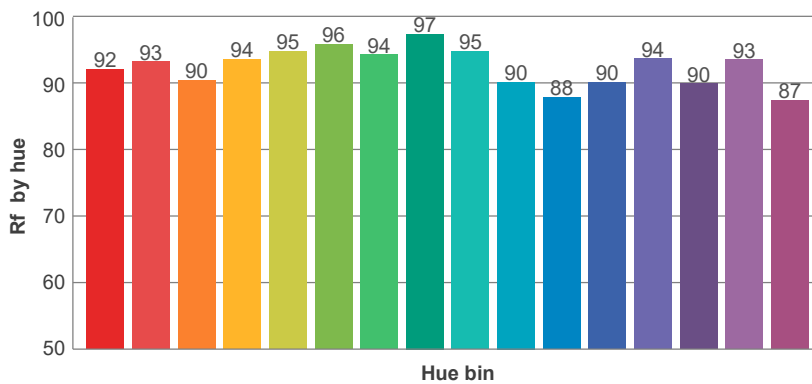
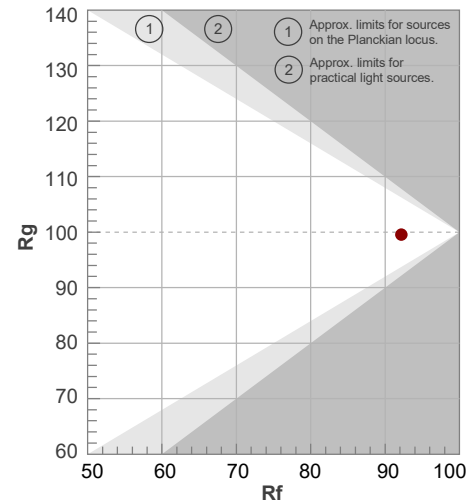
Note: specifications are representative of the diode type and not a particular tape light article.

2700K

**Rf 92.2**  
Fidelity index Rf

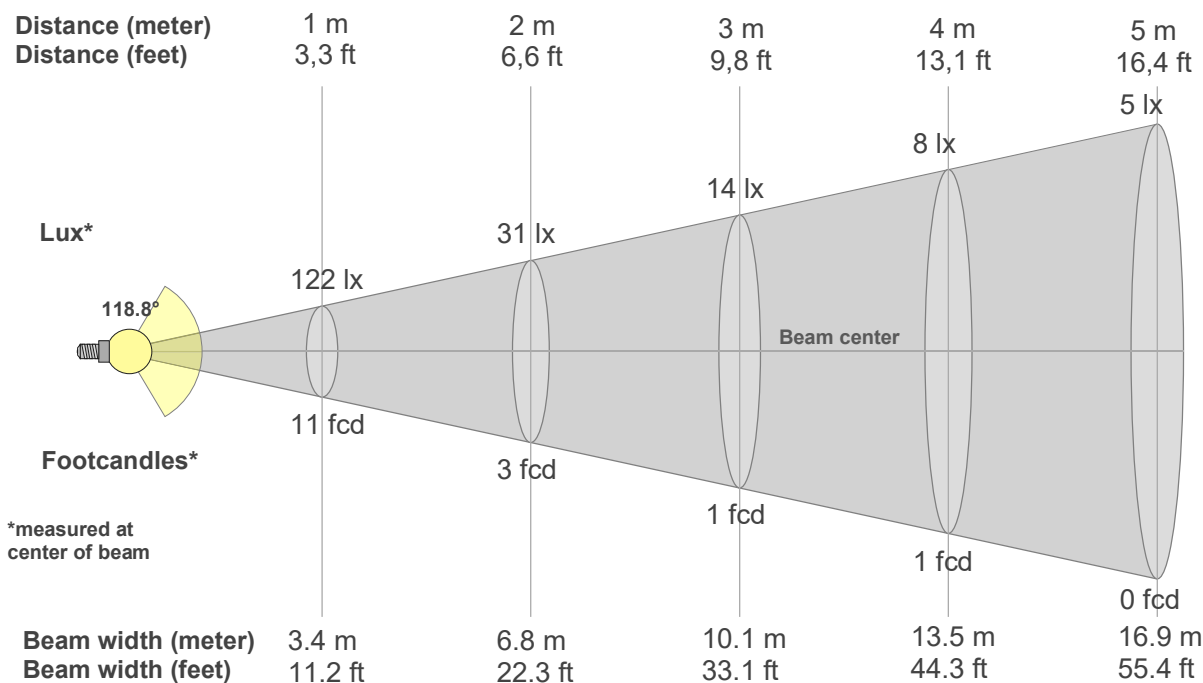
**Rg 99.5**  
Gammut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	92	-4%	0%
2	93	-3%	2%
3	90	-2%	5%
4	94	-1%	3%
5	95	1%	3%
6	96	2%	0%
7	94	-1%	-2%
8	97	-1%	-1%
9	95	-3%	1%
10	90	-2%	6%
11	88	0%	9%
12	90	4%	3%
13	94	3%	-3%
14	90	5%	-6%
15	93	-1%	-4%
16	87	-1%	-10%



Note: specifications are representative of the diode type and not a particular tape light article.

2700K



**Beam intensities from 1-20m**

1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
122lx	31lx	14lx	8lx	5lx	3lx	2lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx
11.4fcd	2.8fcd	1.3fcd	0.7fcd	0.5fcd	0.3fcd	0.2fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0fcd	0fcd	0fcd	0fcd	0fcd

**Intensities in 0° c-plane**

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
122	122	121	119	116	112	107	101	95	87	79	70	60	47	30	15	6	3	1	1
100%	100%	99%	97%	95%	92%	88%	83%	77%	71%	64%	57%	49%	38%	25%	12%	5%	2%	1%	1%

**Intensities in 90° c-plane**

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
122	122	121	119	116	112	107	101	95	87	79	70	60	47	30	15	6	3	1	1
100%	100%	99%	97%	95%	92%	88%	83%	77%	71%	64%	57%	49%	38%	25%	12%	5%	2%	1%	1%

**Intensities in 180° c-plane**

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
122	122	120	118	115	111	106	101	95	89	81	71	59	43	21	7	3	2	1	1
100%	99%	98%	96%	94%	91%	87%	83%	78%	72%	66%	58%	48%	35%	17%	6%	3%	2%	1%	1%

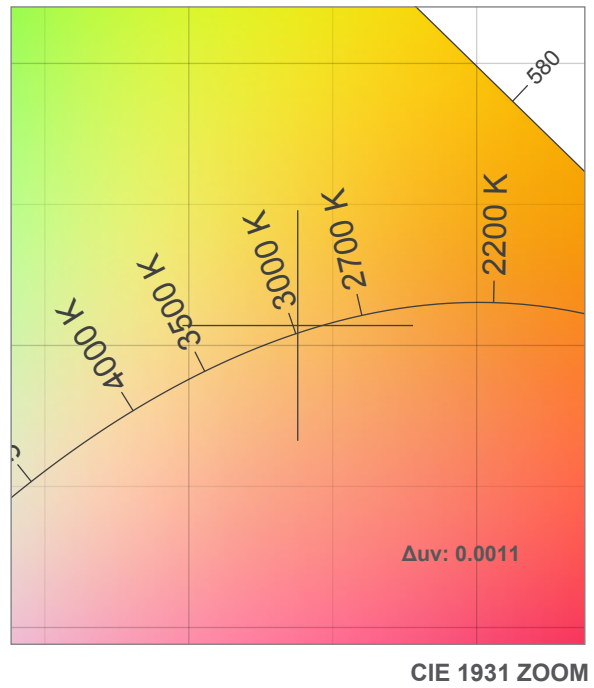
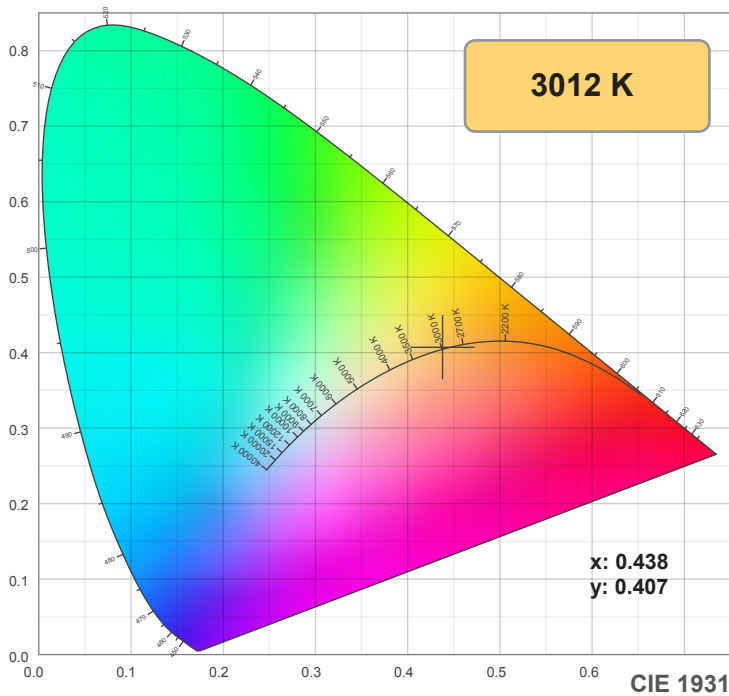
**Intensities in 270° c-plane**

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
122	122	120	118	115	111	106	101	95	89	81	71	59	43	21	7	3	2	1	1
100%	99%	98%	96%	94%	91%	87%	83%	78%	72%	66%	58%	48%	35%	17%	6%	3%	2%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
118.8°	148.7°	164.5°	81.4%	54.2%

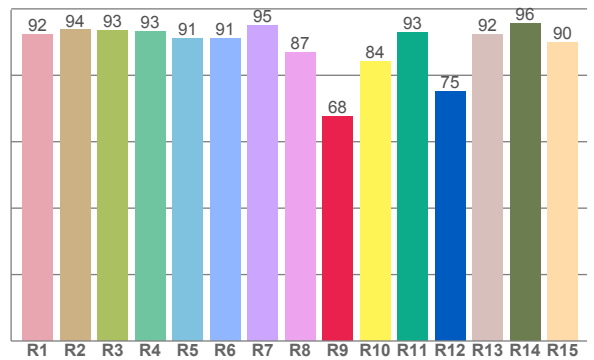
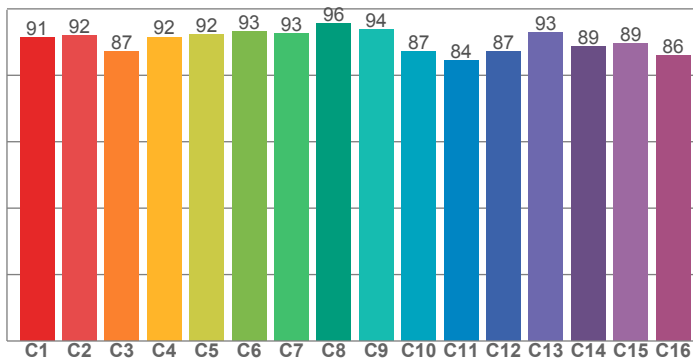
Note: specifications are representative of the diode type and not a particular tape light article.

3000K



TM30: 90.4

CRI: 92.1 (R1-R8)



CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
92.4	93.7	93.4	93.1	91.2	91.1	94.9	86.9	67.5	84.1	93.0	75.2	92.4	95.5	89.8

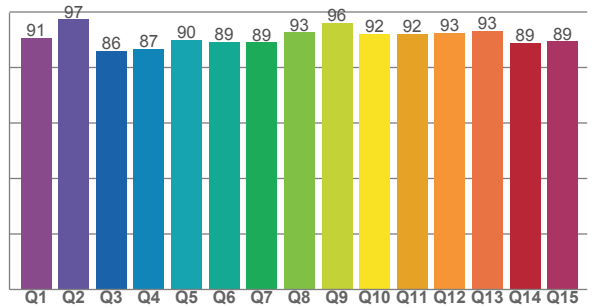
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91.3	92.0	87.2	91.5	92.3	93.1	92.6	95.6	93.8	87.2	84.4	87.1	92.9	88.8	89.5	86.1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
90.8	97.3	85.8	86.8	90.0	89.3	89.0	92.6	96.1	92.0	92.2	92.6	93.0	88.9	89.4

CQS: 90.5



Color parameters

Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3012 K	92.1	67.5	90.4	100.7	90.5	0.438	0.407	0.250	0.348	0.0011

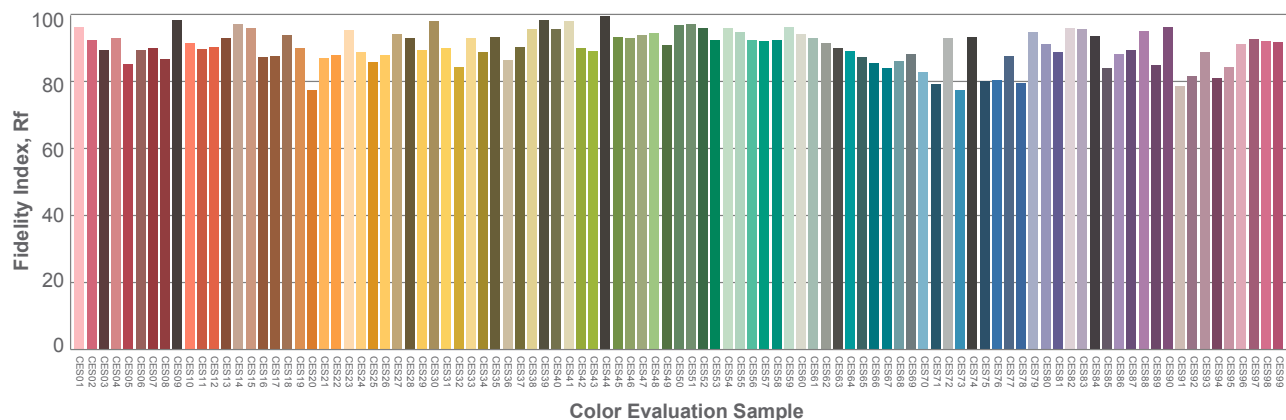
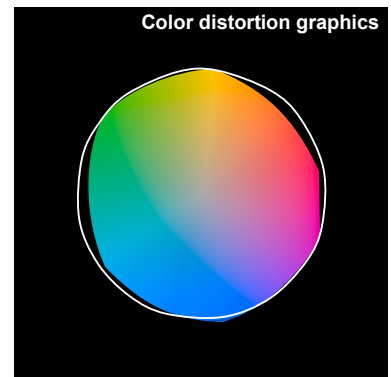
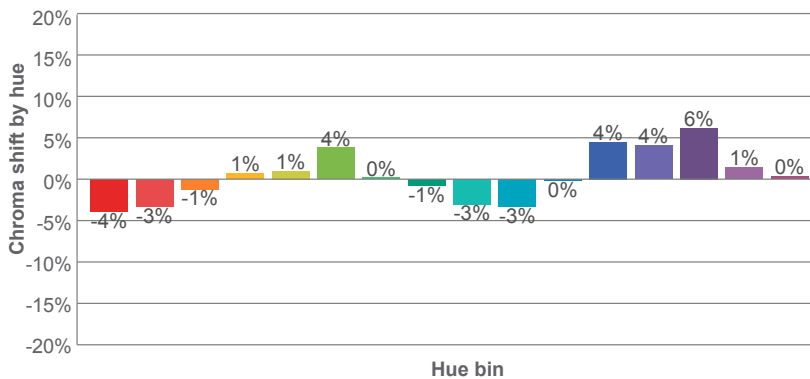
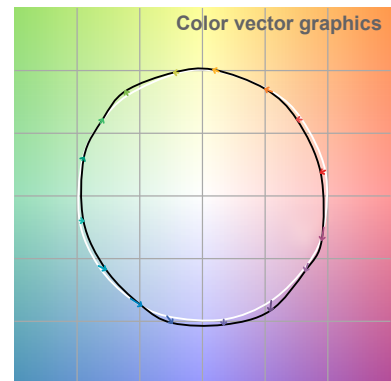
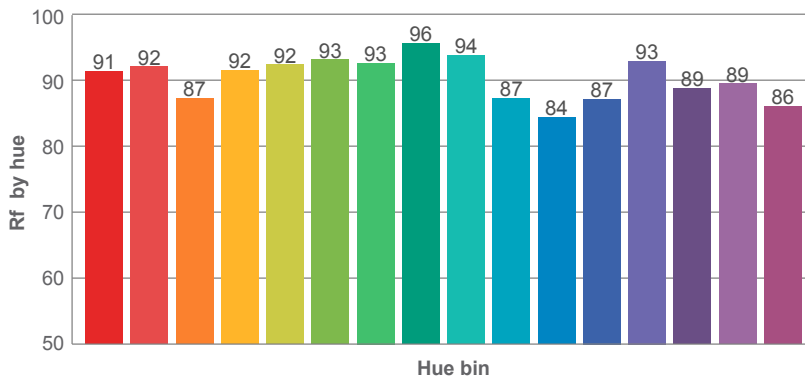
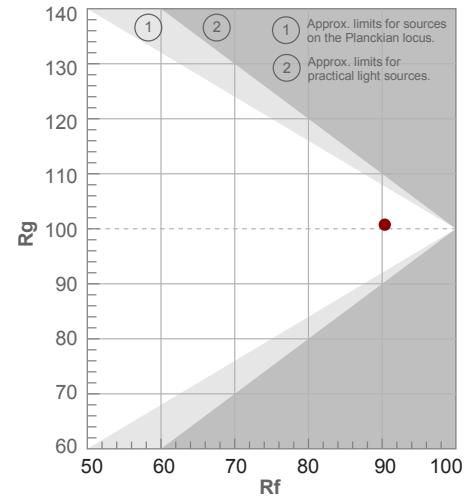
Note: specifications are representative of the diode type and not a particular tape light article.

3000K

**Rf 90.4**  
Fidelity index Rf

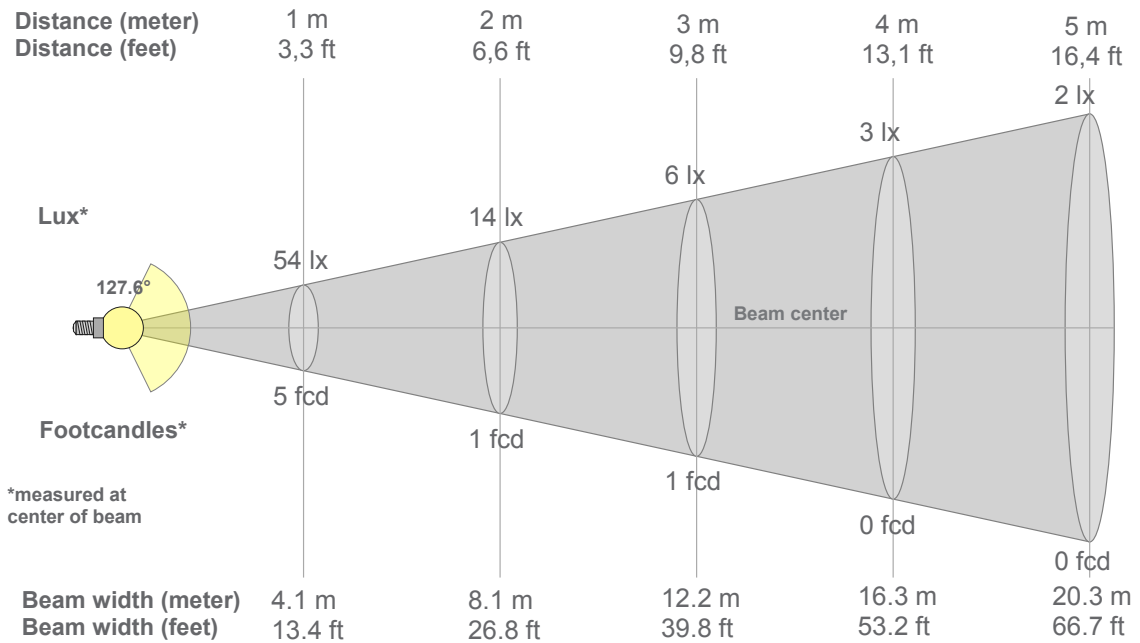
**Rg 100.7**  
Gammut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	91	-4%	-1%
2	92	-3%	2%
3	87	-1%	6%
4	92	1%	5%
5	92	1%	4%
6	93	4%	0%
7	93	0%	-4%
8	96	-1%	-2%
9	94	-3%	1%
10	87	-3%	6%
11	84	0%	10%
12	87	4%	5%
13	93	4%	-1%
14	89	6%	-5%
15	89	1%	-6%
16	86	0%	-10%



Note: specifications are representative of the diode type and not a particular tape light article.

3000K



**Beam intensities from 1-20m**

1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
54lx	14lx	6lx	3lx	2lx	2lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx
5fcd	1.3fcd	0.6fcd	0.3fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd

**Intensities in 0° c-plane**

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
54.1	51.7	48.5	44.2	40.3	37.3	33.2	27.9	22.9	16.2	9.9	4.4	1.3	0.8	0.6	0.5	0.6	0.6	0.7	0.7
100%	96%	90%	82%	74%	69%	61%	52%	42%	30%	18%	8%	2%	2%	1%	1%	1%	1%	1%	1%

**Intensities in 90° c-plane**

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
54.1	51.7	48.5	44.2	40.3	37.3	33.2	27.9	22.9	16.2	9.9	4.4	1.3	0.8	0.6	0.5	0.6	0.6	0.7	0.7
100%	96%	90%	82%	74%	69%	61%	52%	42%	30%	18%	8%	2%	2%	1%	1%	1%	1%	1%	1%

**Intensities in 180° c-plane**

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
54.1	54.9	54.1	51.4	47.0	40.9	34.3	28.0	21.6	15.7	10.3	6.5	4.9	4.1	3.5	2.8	1.6	1.2	1.1	1.0
100%	101%	100%	95%	87%	76%	64%	52%	40%	29%	19%	12%	9%	7%	6%	5%	3%	2%	2%	2%

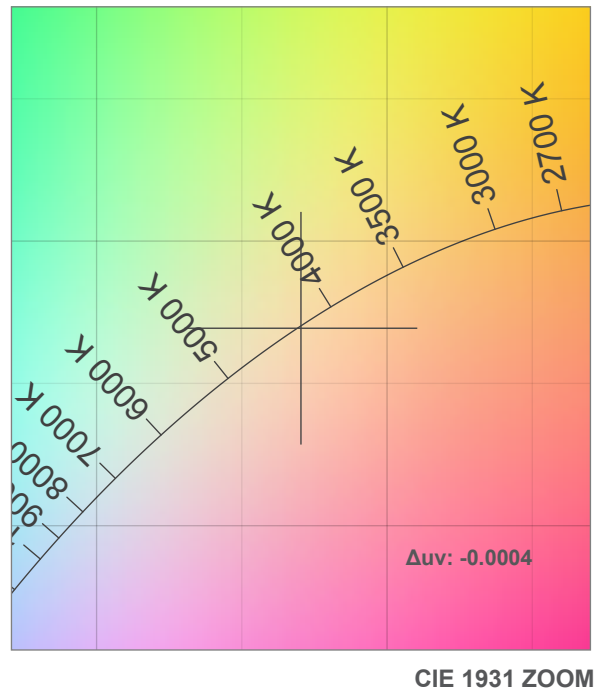
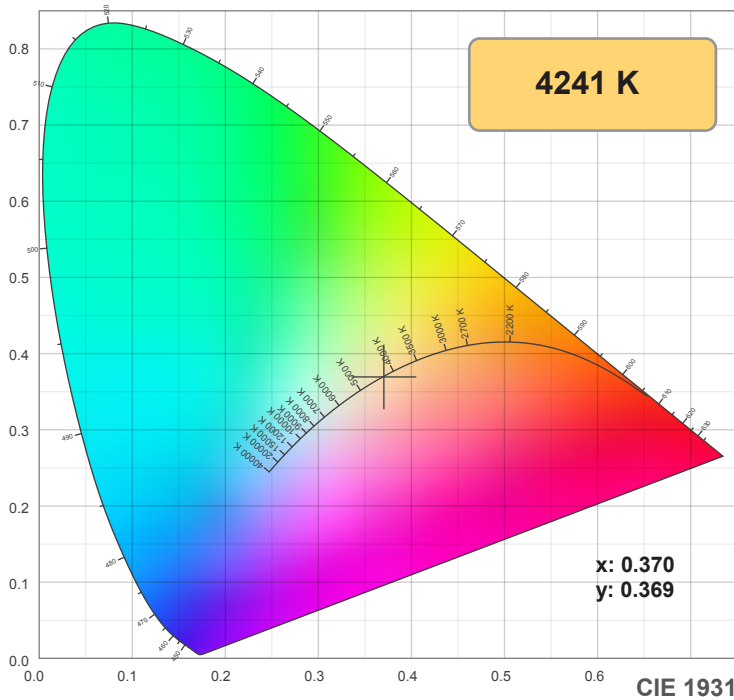
**Intensities in 270° c-plane**

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
54.1	54.9	54.1	51.4	47.0	40.9	34.3	28.0	21.6	15.7	10.3	6.5	4.9	4.1	3.5	2.8	1.6	1.2	1.1	1.0
100%	101%	100%	95%	87%	76%	64%	52%	40%	29%	19%	12%	9%	7%	6%	5%	3%	2%	2%	2%

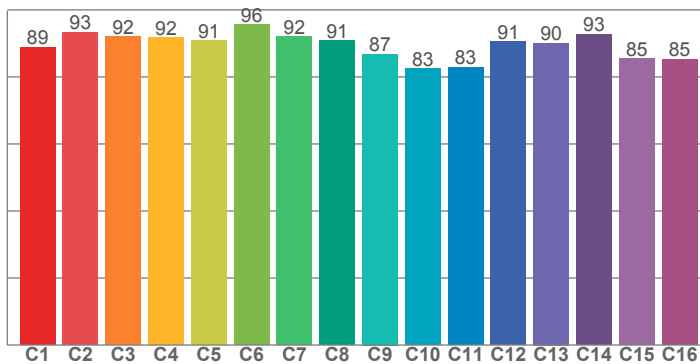
Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
127.6°	200.5°	254.9°	61.4%	40.2%

Note: specifications are representative of the diode type and not a particular tape light article.

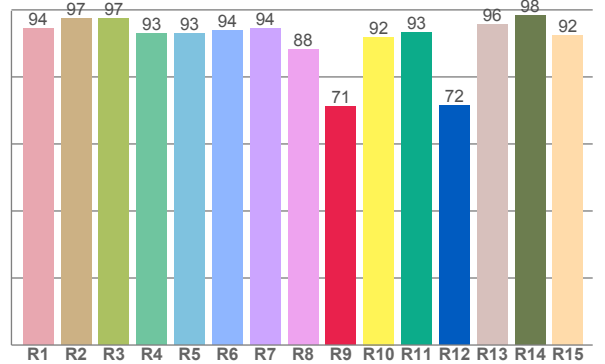
4200K



TM30: 89.3



CRI: 93.9 (R1-R8)



CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
94.5	97.3	97.4	93.0	93.1	93.8	94.4	88.1	71.1	91.9	93.3	71.5	95.7	98.4	92.3

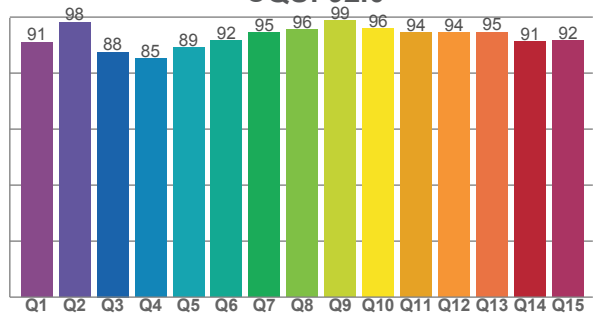
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
88.9	93.4	92.0	91.6	90.9	95.5	92.2	90.7	86.8	82.5	82.9	90.5	90.1	92.8	85.4	85.3

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
91.0	98.2	87.5	85.1	89.2	91.6	94.5	95.6	98.8	95.9	94.4	94.5	94.6	91.3	91.6

CQS: 92.0



Color parameters

Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
4241 K	93.9	71.1	89.3	97.9	92.0	0.370	0.369	0.221	0.331	-0.0004

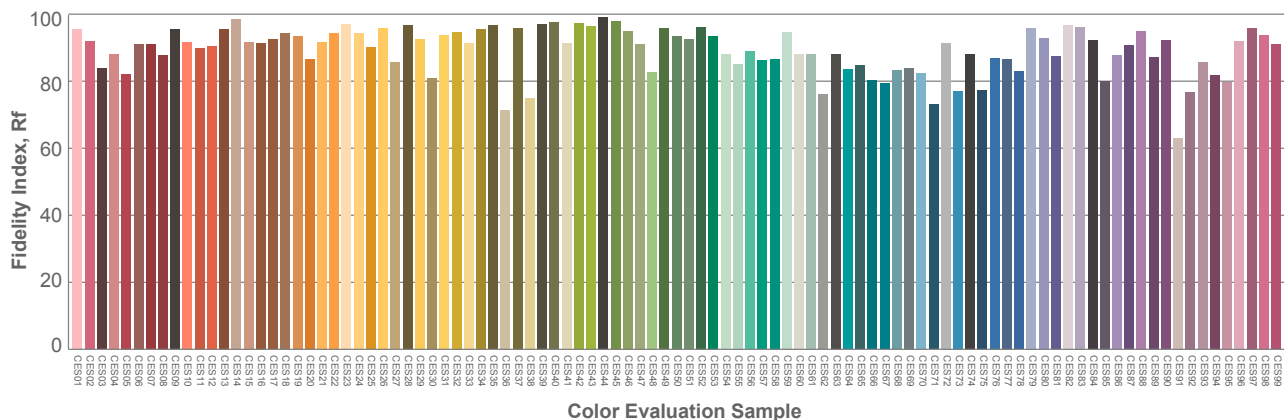
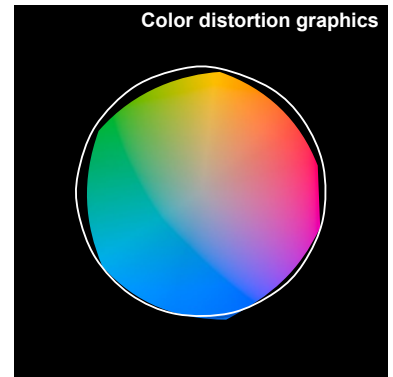
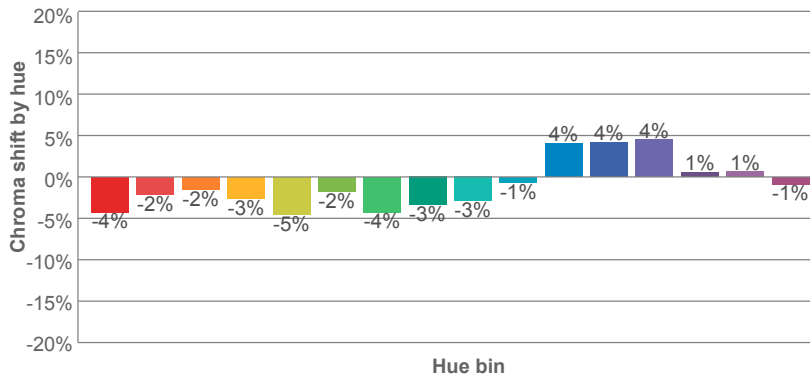
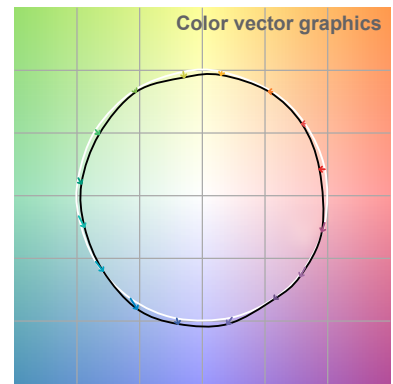
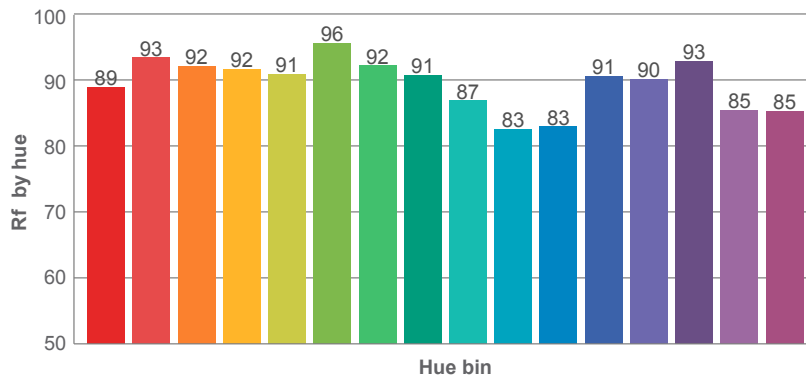
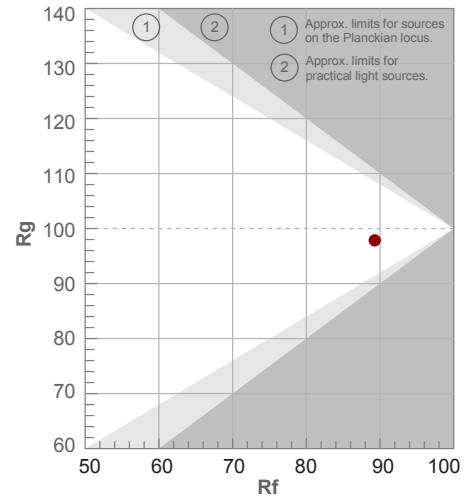
Note: specifications are representative of the diode type and not a particular tape light article.

4200K

**Rf 89.3**  
Fidelity index Rf

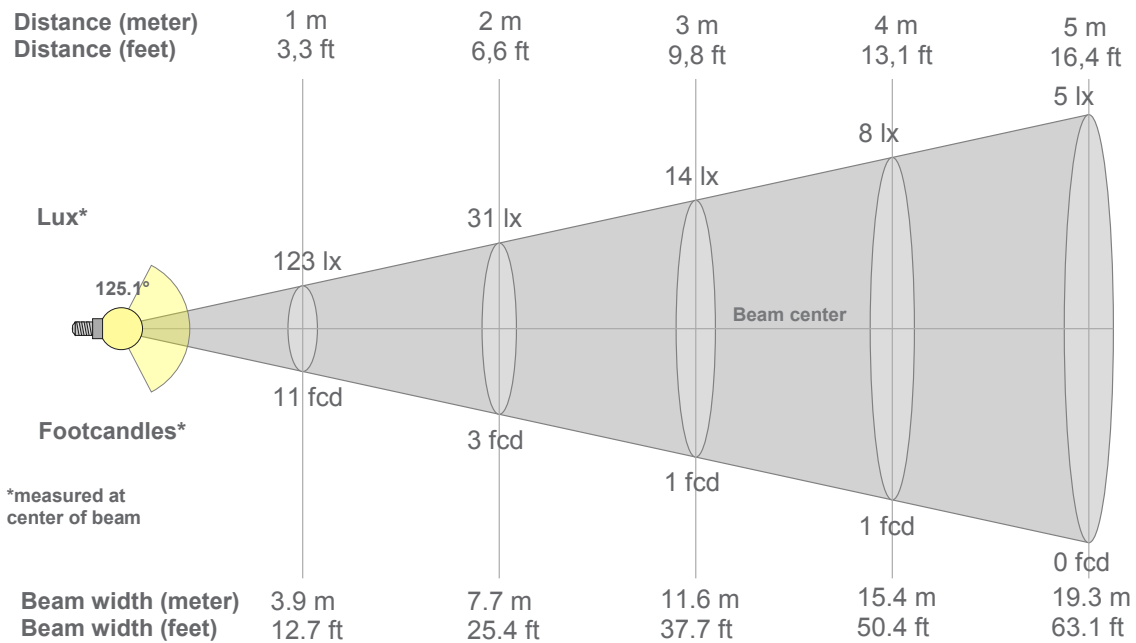
**Rg 97.9**  
Gammut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	89	-4%	1%
2	93	-2%	1%
3	92	-2%	3%
4	92	-3%	0%
5	91	-5%	0%
6	96	-2%	0%
7	92	-4%	1%
8	91	-3%	4%
9	87	-3%	9%
10	83	-1%	9%
11	83	4%	9%
12	91	4%	2%
13	90	4%	-5%
14	93	1%	-3%
15	85	1%	-8%
16	85	-1%	-7%



Note: specifications are representative of the diode type and not a particular tape light article.

4200K



**Beam intensities from 1-20m**

1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
123lx	31lx	14lx	8lx	5lx	3lx	3lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx
11.4fcd	2.9fcd	1.3fcd	0.7fcd	0.5fcd	0.3fcd	0.2fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0fcd	0fcd	0fcd	0fcd	0fcd

**Intensities in 0° c-plane**

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
123	123	122	120	117	113	108	103	99	93	85	76	67	55	32	14	8	5	4	3
100%	100%	99%	98%	95%	92%	88%	84%	80%	75%	69%	62%	55%	45%	26%	12%	6%	4%	3%	2%

**Intensities in 90° c-plane**

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
123	123	122	120	117	113	108	103	99	93	85	76	67	55	32	14	8	5	4	3
100%	100%	99%	98%	95%	92%	88%	84%	80%	75%	69%	62%	55%	45%	26%	12%	6%	4%	3%	2%

**Intensities in 180° c-plane**

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
123	122	121	119	116	113	109	104	99	93	86	79	70	53	27	10	4	3	2	1
100%	100%	99%	97%	94%	92%	89%	85%	80%	76%	70%	64%	57%	43%	22%	8%	3%	2%	1%	1%

**Intensities in 270° c-plane**

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
123	122	121	119	116	113	109	104	99	93	86	79	70	53	27	10	4	3	2	1
100%	100%	99%	97%	94%	92%	89%	85%	80%	76%	70%	64%	57%	43%	22%	8%	3%	2%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
125.1°	149.2°	176.6°	79.2%	51.7%