

Lightsource Test Report

Product Infomation

Product Spec: 6w c

Product Number: 1

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3280$ $y=0.3547$ $u(u')=0.1988$ $v=0.3224$ $v'=0.4836$

CCT: $T_c=5686K$ ($duv=0.00877$)

Color Ratio: $R=0.140$ $G=0.810$ $B=0.051$

Peak Wavelength: 447.6nm

Half Bandwidth: 21.8nm

Dominant Wavelength: 539.9nm

Color Purity: 0.051

CRI: $R_a=84.3$

TM30: $R_f=83$, $R_g=94$

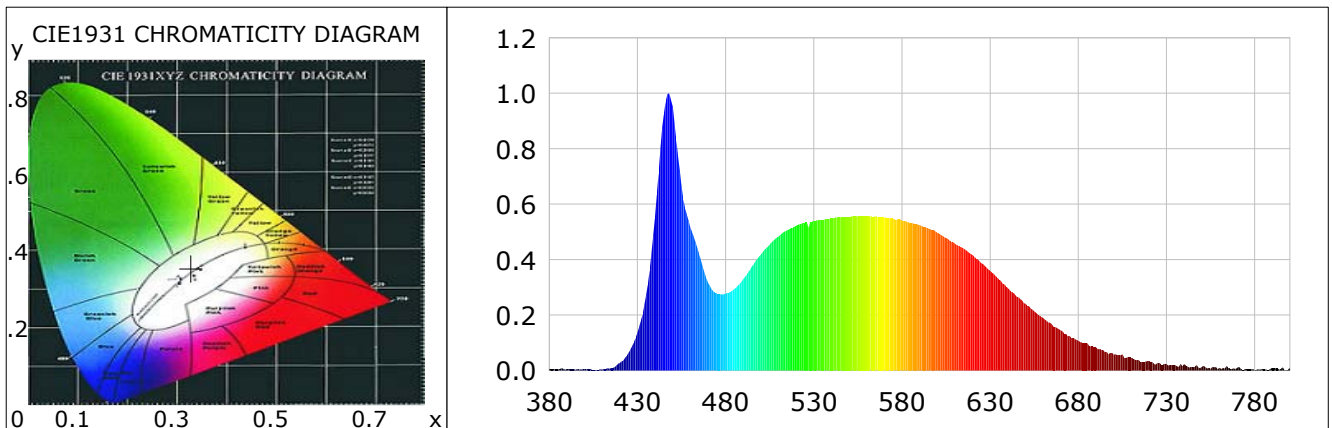
$R_1=83$ $R_2=84$ $R_3=85$ $R_4=90$ $R_5=83$ $R_6=79$ $R_7=92$ $R_8=78$

$R_9=19$ $R_{10}=62$ $R_{11}=89$ $R_{12}=54$ $R_{13}=82$ $R_{14}=92$ $R_{15}=79$

Color Quality Scale: $Q_a=84.0$, $Q_f=84.3$, $Q_p=82.8$, $Q_g=90.8$

$Q_1=85$ $Q_2=98$ $Q_3=82$ $Q_4=77$ $Q_5=81$ $Q_6=83$ $Q_7=87$ $Q_8=92$

$Q_9=97$ $Q_{10}=89$ $Q_{11}=86$ $Q_{12}=85$ $Q_{13}=85$ $Q_{14}=75$ $Q_{15}=79$



Photometric Parameters

Luminous Flux: 409.48 lm
EEI: 0.17

Efficiency: 62.04 lm/W

Radiant Power: 1.274 W

Energy Efficiency Class: A (EU 874-2012)

Electric Parameters

Voltage: 230.40V

Current: 0.0610A

Power: 6.60W

Power Factor: 0.4670

Frequency: 50.00Hz

Test Infomation

Scan Range: 380~800:1nm

Stabilization Time: 15 Sec

Max of Signal: 54722 (3176)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.00m, 4T

CCD Integration Time: 2796.63 ms

Condition: $T_x:0.0^{\circ}C$, $T_i:0.0^{\circ}C$, R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2018-09-30 09:25:16

Inspector:

Lightsource Test Report

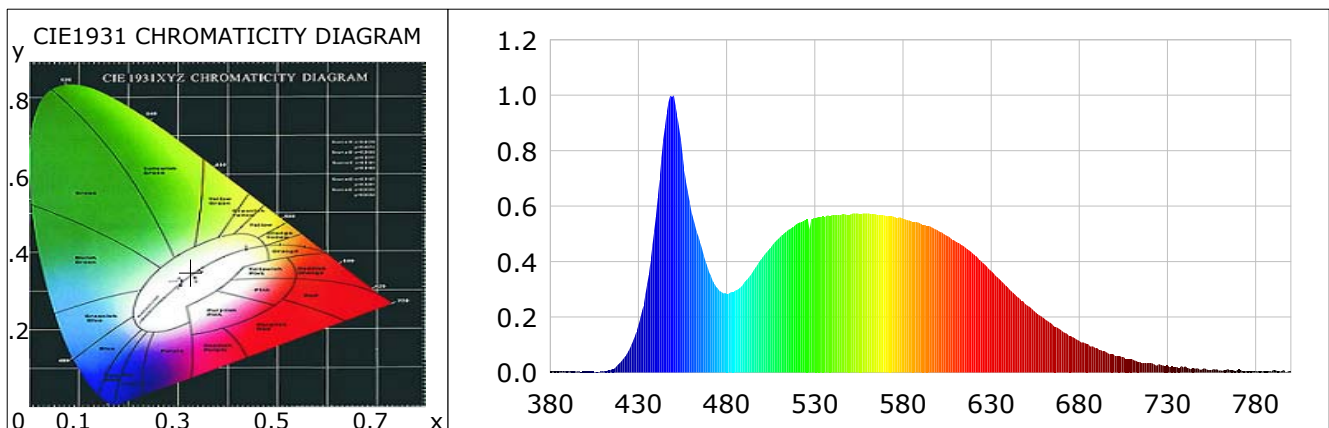
Product Information

Product Spec: 12w c

Product Number: 2

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3254$ $y=0.3492$ $u(u')=0.1991$ $v=0.3204$ $v'=0.4806$
 CCT: $T_c=5802K$ ($duv=0.00725$) Color Ratio: $R=0.140$ $G=0.809$ $B=0.051$
 Peak Wavelength: 449.6nm Half Bandwidth: 24.7nm
 Dominant Wavelength: 521.5nm Color Purity: 0.032
 CRI: $R_a=84.5$ TM30: $R_f=82$, $R_g=95$
 $R1=83$ $R2=84$ $R3=84$ $R4=90$ $R5=84$ $R6=78$ $R7=92$ $R8=79$
 $R9=22$ $R10=61$ $R11=90$ $R12=53$ $R13=83$ $R14=91$ $R15=80$
 Color Quality Scale: $Q_a=83.6$, $Q_f=83.8$, $Q_p=82.8$, $Q_g=91.4$
 $Q1=85$ $Q2=98$ $Q3=81$ $Q4=75$ $Q5=80$ $Q6=83$ $Q7=87$ $Q8=92$
 $Q9=96$ $Q10=88$ $Q11=85$ $Q12=84$ $Q13=84$ $Q14=75$ $Q15=80$



Photometric Parameters

Luminous Flux: 1013.69 lm Efficiency: 78.58 lm/W Radiant Power: 3.186 W
 EEI: 0.17 Energy Efficiency Class: A+ (EU 874-2012)

Electric Parameters

Voltage: 230.00V Current: 0.1080A Power: 12.90W
 Power Factor: 0.5170 Frequency: 50.00Hz

Test Information

Scan Range: 380~800:1nm
 Stabilization Time: 15 Sec
 Max of Signal: 45397 (2994)

Photometric Method: sphere-spectroradiometer
 Photometric Condition: Sphere diameter: 1.00m, 4T
 CCD Integration Time: 1314.04 ms

Condition: $T_x:0.0^{\circ}C$, $T_i:0.0^{\circ}C$, R.H.:60%
 Test Lab:
 Operator:

Test Device: Inventfine CMS-2S (Plus)
 Test Time: 2018-09-30 09:28:46
 Inspector:

Lightsource Test Report

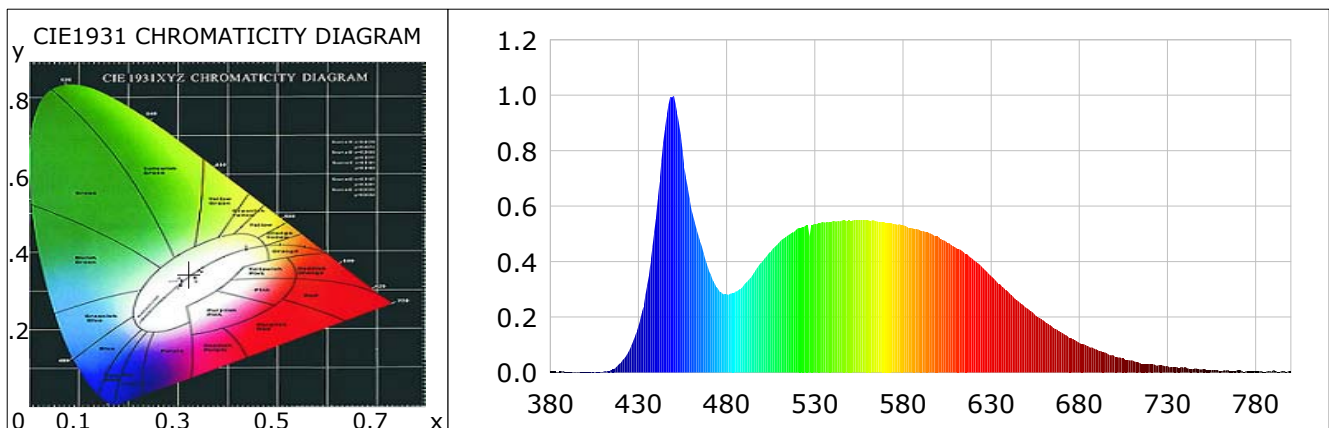
Product Infomation

Product Spec: 18w c

Product Number: 3

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3219$ $y=0.3443$ $u(u')=0.1985$ $v=0.3184$ $v'(v')=0.4776$
 CCT: $T_c=5970K$ ($duv=0.00647$) Color Ratio: $R=0.139$ $G=0.809$ $B=0.053$
 Peak Wavelength: 449.7nm Half Bandwidth: 24.8nm
 Dominant Wavelength: 504.9nm Color Purity: 0.035
 CRI: $R_a=85.0$ TM30: $R_f=82$, $R_g=95$
 $R1=84$ $R2=85$ $R3=84$ $R4=91$ $R5=84$ $R6=79$ $R7=93$ $R8=80$
 $R9=25$ $R10=62$ $R11=90$ $R12=54$ $R13=84$ $R14=91$ $R15=81$
 Color Quality Scale: $Q_a=83.7$, $Q_f=83.8$, $Q_p=83.2$, $Q_g=91.7$
 $Q1=86$ $Q2=99$ $Q3=81$ $Q4=75$ $Q5=80$ $Q6=83$ $Q7=88$ $Q8=93$
 $Q9=96$ $Q10=88$ $Q11=84$ $Q12=84$ $Q13=84$ $Q14=76$ $Q15=80$



Photometric Parameters

Luminous Flux: 1506.13 lm Efficiency: 80.97 lm/W Radiant Power: 4.774 W
 EEI: 0.17 Energy Efficiency Class: A+ (EU 874-2012)

Electric Parameters

Voltage: 230.30V Current: 0.1510A Power: 18.60W
 Power Factor: 0.5350 Frequency: 50.00Hz

Test Infomation

Scan Range: 380~800:1nm
 Stabilization Time: 15 Sec
 Max of Signal: 45754 (2902)

Photometric Method: sphere-spectroradiometer
 Photometric Condition: Sphere diameter: 1.00m, 4T
 CCD Integration Time: 856.72 ms

Condition: $T_x:0.0^{\circ}C$, $T_i:0.0^{\circ}C$, R.H.:60%
 Test Lab:
 Operator:

Test Device: Inventfine CMS-2S (Plus)
 Test Time: 2018-09-30 09:30:40
 Inspector:

Lightsource Test Report

Product Infomation

Product Spec: 24w c

Product Number: 4

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3218$ $y=0.3459$ $u(u')=0.1978$ $v=0.3189$ $v'(v')=0.4784$

CCT: $T_c=5972K$ ($duv=0.00729$)

Color Ratio: $R=0.137$ $G=0.811$ $B=0.052$

Peak Wavelength: 448.2nm

Half Bandwidth: 24.4nm

Dominant Wavelength: 506.7nm

Color Purity: 0.035

CRI: $R_a=84.4$

TM30: $R_f=82$, $R_g=95$

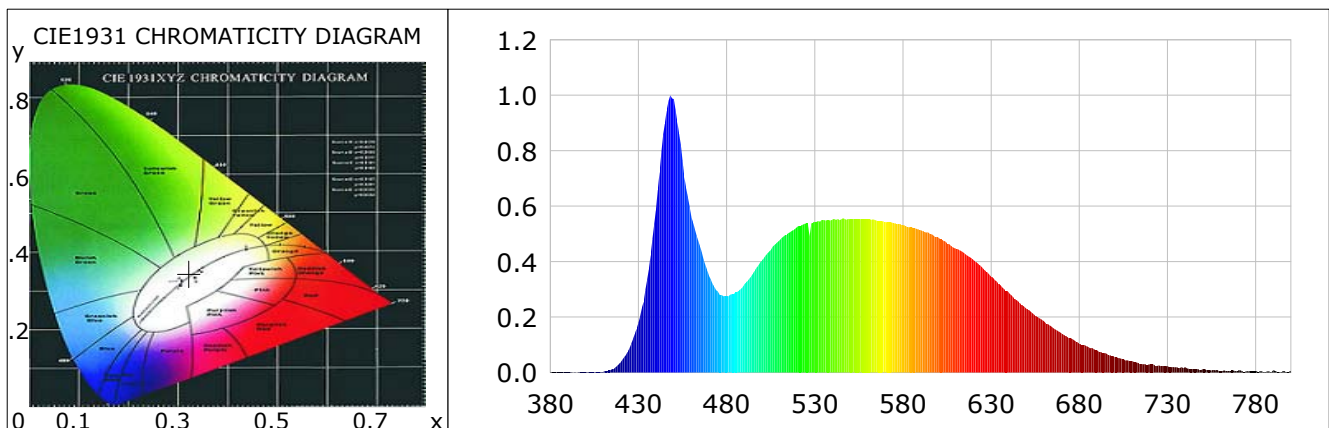
$R_1=83$ $R_2=84$ $R_3=84$ $R_4=90$ $R_5=84$ $R_6=78$ $R_7=92$ $R_8=79$

$R_9=22$ $R_{10}=61$ $R_{11}=90$ $R_{12}=53$ $R_{13}=83$ $R_{14}=91$ $R_{15}=80$

Color Quality Scale: $Q_a=83.7$, $Q_f=83.8$, $Q_p=83.1$, $Q_g=91.6$

$Q_1=86$ $Q_2=99$ $Q_3=81$ $Q_4=75$ $Q_5=81$ $Q_6=83$ $Q_7=88$ $Q_8=93$

$Q_9=96$ $Q_{10}=88$ $Q_{11}=84$ $Q_{12}=84$ $Q_{13}=84$ $Q_{14}=75$ $Q_{15}=80$



Photometric Parameters

Luminous Flux: 2009.81 lm
EEI: 0.17

Efficiency: 80.39 lm/W

Radiant Power: 6.335 W

Energy Efficiency Class: A+ (EU 874-2012)

Electric Parameters

Voltage: 230.40V

Current: 0.2090A

Power: 25.00W

Power Factor: 0.5180

Frequency: 50.00Hz

Test Infomation

Scan Range: 380~800:1nm

Stabilization Time: 15 Sec

Max of Signal: 45610 (2837)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.00m, 4T

CCD Integration Time: 644.05 ms

Condition: $T_x:0.0^{\circ}C$, $T_i:0.0^{\circ}C$, R.H.:60%

Test Lab:

Operator:

Test Device: Inventfine CMS-2S (Plus)

Test Time: 2018-09-30 09:32:42

Inspector:

Lightsource Test Report

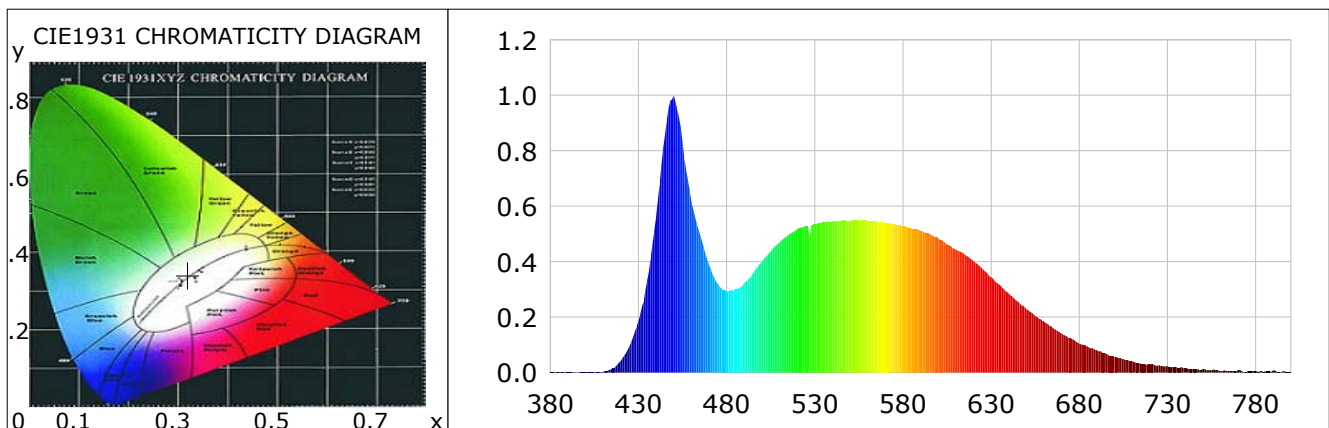
Product Infomation

Product Spec: 24w h

Product Number: 5

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3194$ $y=0.3415$ $u(u')=0.1978$ $v=0.3172$ $v'=0.4759$
 CCT: $T_c=6098K$ ($duv=0.00627$) Color Ratio: $R=0.137$ $G=0.809$ $B=0.054$
 Peak Wavelength: 449.9nm Half Bandwidth: 26.0nm
 Dominant Wavelength: 499.5nm Color Purity: 0.043
 CRI: $R_a=85.2$ TM30: $R_f=82$, $R_g=95$
 $R1=84$ $R2=85$ $R3=84$ $R4=91$ $R5=84$ $R6=79$ $R7=93$ $R8=80$
 $R9=26$ $R10=63$ $R11=90$ $R12=54$ $R13=84$ $R14=91$ $R15=82$
 Color Quality Scale: $Q_a=83.7$, $Q_f=83.8$, $Q_p=83.2$, $Q_g=91.7$
 $Q1=86$ $Q2=99$ $Q3=81$ $Q4=74$ $Q5=80$ $Q6=82$ $Q7=88$ $Q8=93$
 $Q9=96$ $Q10=88$ $Q11=84$ $Q12=84$ $Q13=84$ $Q14=76$ $Q15=80$



Photometric Parameters

Luminous Flux: 1960.09 lm Efficiency: 80.66 lm/W Radiant Power: 6.244 W
 EEI: 0.17 Energy Efficiency Class: A+ (EU 874-2012)

Electric Parameters

Voltage: 230.40V Current: 0.2050A Power: 24.30W
 Power Factor: 0.5120 Frequency: 50.00Hz

Test Infomation

Scan Range: 380~800:1nm
 Stabilization Time: 25 Min
 Max of Signal: 44336 (2956)

Photometric Method: sphere-spectroradiometer
 Photometric Condition: Sphere diameter: 1.00m, 4T
 CCD Integration Time: 640.65 ms

Condition: $T_x:0.0^{\circ}C$, $T_i:0.0^{\circ}C$, R.H.:60%
 Test Lab:
 Operator:

Test Device: Inventfine CMS-2S (Plus)
 Test Time: 2018-09-30 10:02:17
 Inspector:

Lightsource Test Report

Product Information

Product Spec: 18w h

Product Number: 6

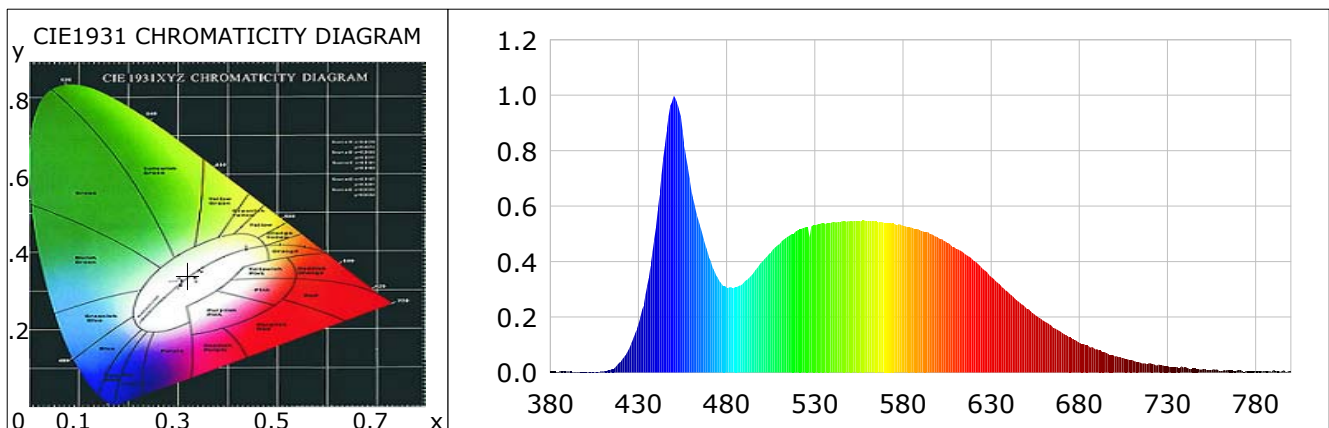
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3193$ $y=0.3402$ $u(u')=0.1982$ $v=0.3168$ $v'(v')=0.4751$
 CCT: $T_c=6108K$ ($duv=0.00565$) Color Ratio: $R=0.138$ $G=0.806$ $B=0.055$
 Peak Wavelength: 450.2nm Half Bandwidth: 26.8nm
 Dominant Wavelength: 498.1nm Color Purity: 0.044
 CRI: $R_a=85.8$ TM30: $R_f=82$, $R_g=95$

R1 =85	R2 =86	R3 =85	R4 =91	R5 =85	R6 =80	R7 =94	R8 =81
R9 =28	R10=65	R11=90	R12=54	R13=85	R14=92	R15=83	

 Color Quality Scale: $Q_a=83.7$, $Q_f=83.8$, $Q_p=83.2$, $Q_g=91.7$

Q1 =86	Q2 =98	Q3 =81	Q4 =74	Q5 =79	Q6 =82	Q7 =88	Q8 =93
Q9 =96	Q10=89	Q11=85	Q12=84	Q13=84	Q14=77	Q15=81	



Photometric Parameters

Luminous Flux: 1508.73 lm Efficiency: 83.36 lm/W Radiant Power: 4.836 W
 EEI: 0.16 Energy Efficiency Class: A+ (EU 874-2012)

Electric Parameters

Voltage: 230.40V Current: 0.1490A Power: 18.10W
 Power Factor: 0.5270 Frequency: 50.00Hz

Test Information

Scan Range: 380~800:1nm
 Stabilization Time: 25 Min
 Max of Signal: 45475 (3041)

Photometric Method: sphere-spectroradiometer
 Photometric Condition: Sphere diameter: 1.00m, 4T
 CCD Integration Time: 849.99 ms

Condition: $T_x:0.0^{\circ}C$, $T_i:0.0^{\circ}C$, R.H.:60%
 Test Lab:
 Operator:

Test Device: Inventfine CMS-2S (Plus)
 Test Time: 2018-09-30 10:04:47
 Inspector:

Lightsource Test Report

Product Infomation

Product Spec: 12w h

Product Number: 7

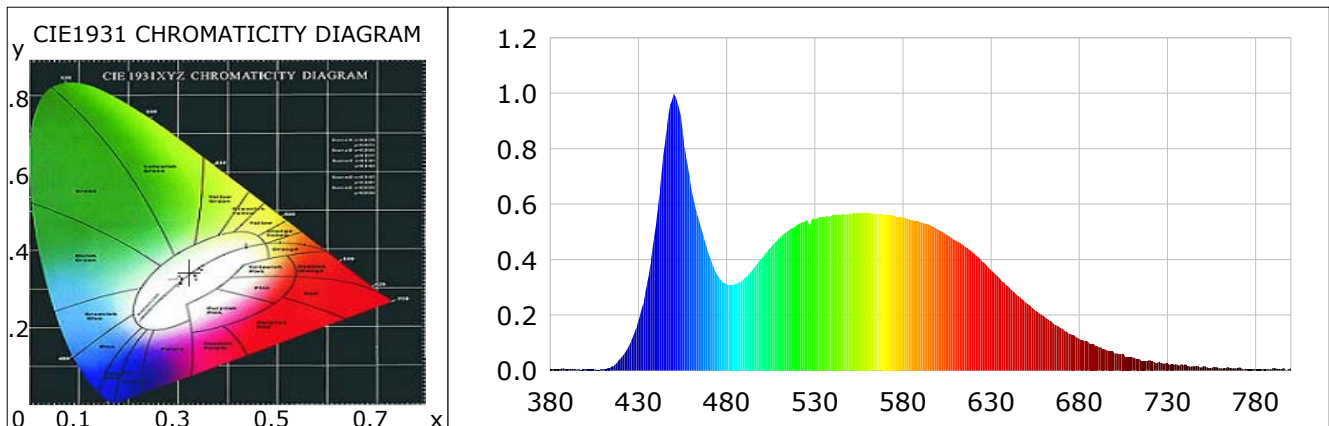
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3225$ $y=0.3440$ $u(u')=0.1990$ $v=0.3184$ $v'=0.4776$
 CCT: $T_c=5942K$ ($duv=0.00601$) Color Ratio: $R=0.140$ $G=0.806$ $B=0.054$
 Peak Wavelength: 450.1nm Half Bandwidth: 26.7nm
 Dominant Wavelength: 505.3nm Color Purity: 0.033
 CRI: $R_a=85.5$ TM30: $R_f=82$, $R_g=94$

R1 =84	R2 =86	R3 =85	R4 =91	R5 =84	R6 =80	R7 =93	R8 =80
R9 =26	R10=64	R11=90	R12=54	R13=84	R14=92	R15=82	

 Color Quality Scale: $Q_a=83.6$, $Q_f=83.8$, $Q_p=82.9$, $Q_g=91.5$

Q1 =85	Q2 =98	Q3 =81	Q4 =74	Q5 =79	Q6 =82	Q7 =87	Q8 =93
Q9 =96	Q10=89	Q11=85	Q12=84	Q13=84	Q14=76	Q15=80	



Photometric Parameters

Luminous Flux: 979.71 lm Efficiency: 77.14 lm/W Radiant Power: 3.121 W
 EEI: 0.17 Energy Efficiency Class: A+ (EU 874-2012)

Electric Parameters

Voltage: 230.50V Current: 0.1070A Power: 12.70W
 Power Factor: 0.5140 Frequency: 50.00Hz

Test Infomation

Scan Range: 380~800:1nm
 Stabilization Time: 25 Sec
 Max of Signal: 45049 (3159)

Photometric Method: sphere-spectroradiometer
 Photometric Condition: Sphere diameter: 1.00m, 4T
 CCD Integration Time: 1345.84 ms

Condition: $T_x:0.0^{\circ}C$, $T_i:0.0^{\circ}C$, R.H.:60%
 Test Lab:
 Operator:

Test Device: Inventfine CMS-2S (Plus)
 Test Time: 2018-09-30 10:07:17
 Inspector:

Lightsource Test Report

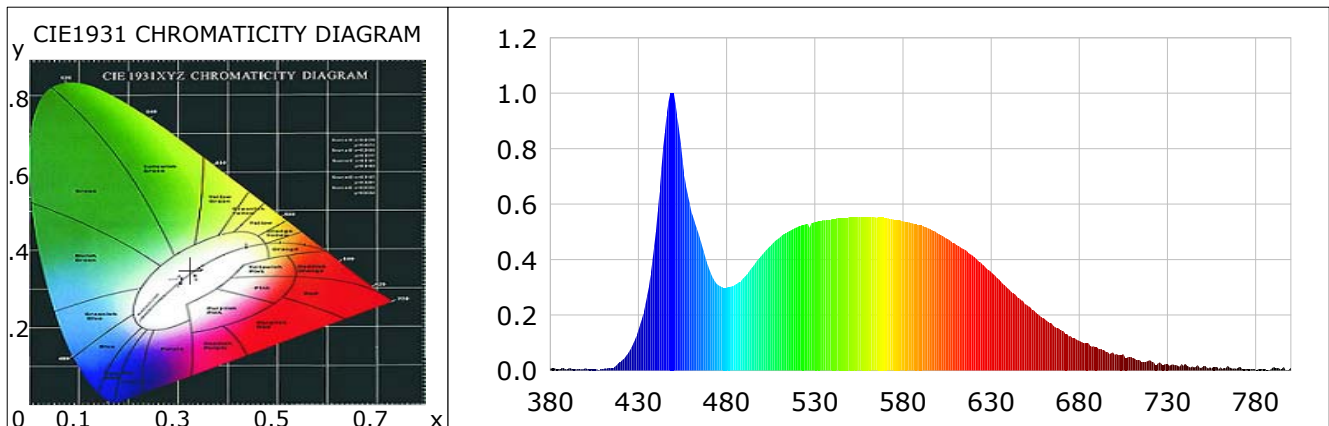
Product Infomation

Product Spec: 6w h

Product Number: 8

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3245$ $y=0.3496$ $u(u')=0.1983$ $v=0.3204$ $v'=0.4806$
 CCT: $T_c=5842K$ ($duv=0.00785$) Color Ratio: $R=0.139$ $G=0.808$ $B=0.053$
 Peak Wavelength: 449.5nm Half Bandwidth: 23.8nm
 Dominant Wavelength: 518.7nm Color Purity: 0.033
 CRI: $R_a=85.0$ TM30: $R_f=83$, $R_g=94$
 $R1=83$ $R2=85$ $R3=86$ $R4=90$ $R5=84$ $R6=80$ $R7=93$ $R8=79$
 $R9=22$ $R10=64$ $R11=89$ $R12=54$ $R13=83$ $R14=92$ $R15=80$
 Color Quality Scale: $Q_a=83.9$, $Q_f=84.2$, $Q_p=82.7$, $Q_g=90.9$
 $Q1=85$ $Q2=98$ $Q3=82$ $Q4=76$ $Q5=81$ $Q6=82$ $Q7=87$ $Q8=92$
 $Q9=97$ $Q10=90$ $Q11=86$ $Q12=85$ $Q13=85$ $Q14=75$ $Q15=79$



Photometric Parameters

Luminous Flux: 400.26 lm Efficiency: 61.58 lm/W Radiant Power: 1.260 W
 EEI: 0.17 Energy Efficiency Class: A (EU 874-2012)

Electric Parameters

Voltage: 230.30V Current: 0.0600A Power: 6.50W
 Power Factor: 0.4620 Frequency: 50.00Hz

Test Infomation

Scan Range: 380~800:1nm
 Stabilization Time: 25 Sec
 Max of Signal: 45904 (3331)

Photometric Method: sphere-spectroradiometer
 Photometric Condition: Sphere diameter: 1.00m, 4T
 CCD Integration Time: 2336.04 ms

Condition: $T_x:0.0^{\circ}C$, $T_i:0.0^{\circ}C$, R.H.:60%
 Test Lab:
 Operator:

Test Device: Inventfine CMS-2S (Plus)
 Test Time: 2018-09-30 10:10:22
 Inspector: