

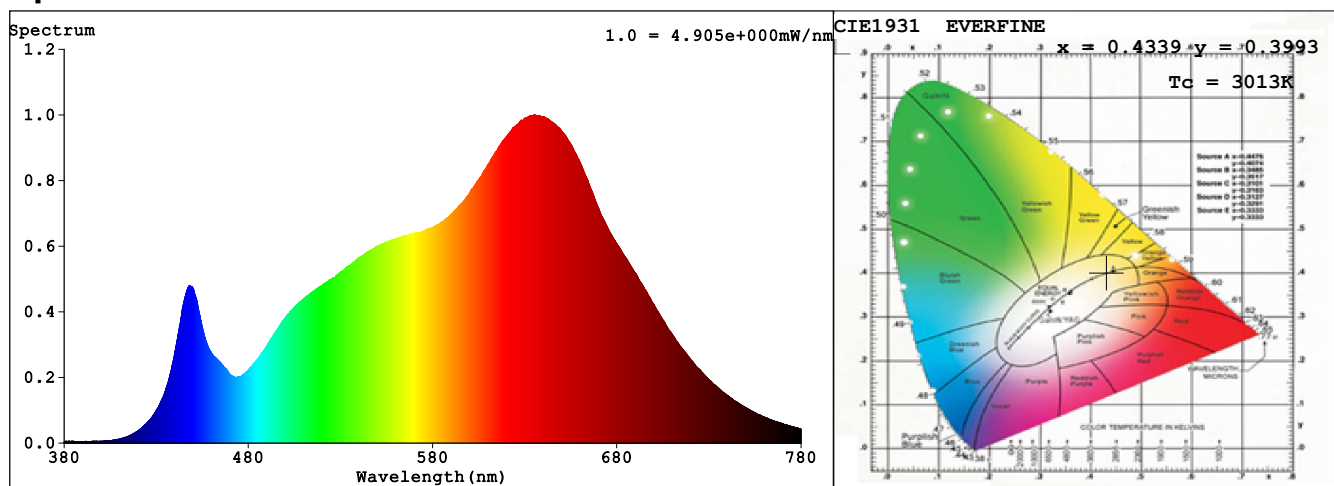
Spectrum Test Report

| | | | |
|---------------|---------|-------------|-----------------------|
| Sample | : | Date | : 2020-08-12 13:21:49 |
| Specification | : | Sam. Status | : |
| Sample No. | : #1-WW | Instrument | : HaasSuite(EVERFINE) |
| Manufacturer | : | Test by | : L |

Test Condition

| | | | |
|-------------|---------------|----------|---------------|
| Temperature | : Deg | RH | : % |
| WL Range | : 380nm-780nm | IP | : 53337 (81%) |
| Test Mode | : Fast Test | T | : 1334 ms |
| | | Delicacy | : Low |

Spectrum



Spectral Distribution

CIE1931 Chromaticity Diagram

Colorimetric Quantities

Chromaticity Coordinate: $x = 0.4339$ $y = 0.3993$ / $u' = 0.2507$ $v' = 0.5190$ ($duv = -1.51e-03$)
 $T_c = 3013K$ Prcp WL: $\lambda_d = 583.3nm$ Purity=50.1%
 Peak WL: $\lambda_p = 635nm$ Half Width: $\Delta\lambda_p = 166.8nm$ Ratio: R=26.6% G=70.6% B=2.7%

Render Index: $R_a = 97.4$

| | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|
| R1 =98 | R2 =99 | R3 =95 | R4 =95 | R5 =98 | R6 =98 | R7 =98 | |
| R8 =98 | R9 =99 | R10=97 | R11=93 | R12=92 | R13=99 | R14=96 | R15=98 |

Photometric & Radiometric Quantities

Flux = 216.92 lm Eff. : 43.66 lm/W Fe = 827.37 mW

Electrical parameters

V = 12.00 V I = 0.4141 A P = 4.968 W PF = 1.000

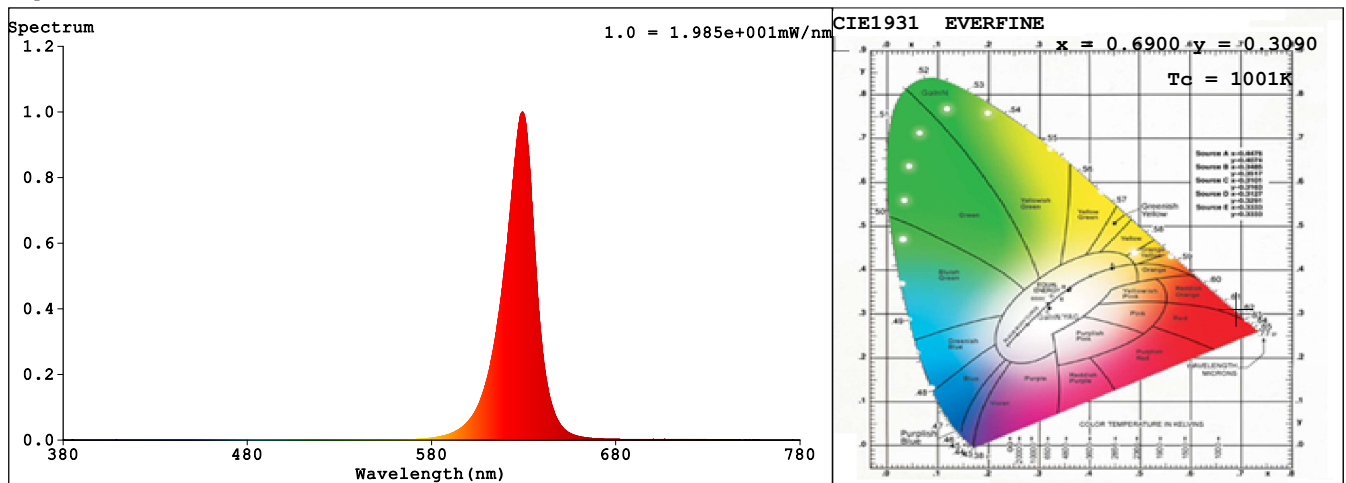
Spectrum Test Report

| | | |
|-------------------|---------------|---------------------|
| Sample : | Date : | 2020-08-12 13:23:04 |
| Specification : | Sam. Status : | |
| Sample No. : #1-R | Instrument : | HaasSuite(EVERFINE) |
| Manufacturer : | Test by : | L |

Test Condition

| | |
|------------------------|------------------|
| Temperature : Deg | RH : % |
| WL Range : 380nm-780nm | IP : 54216 (83%) |
| Test Mode : Fast Test | T : 333 ms |
| | Delicacy : Low |

Spectrum



Spectral Distribution

CIE1931 Chromaticity Diagram

Colorimetric Quantities

Chromaticity Coordinate: $x = 0.6900$ $y = 0.3090$ / $u' = 0.5180$ $v' = 0.5220$ ($duv = -7.04e-02$)

$T_c = 1001K$ Prcp WL: $\lambda_d = 619.7nm$ Purity=99.8%

Peak WL: $\lambda_p = 630nm$ Half Width: $\Delta\lambda_p = 17.8nm$ Ratio: R=95.3% G=4.7% B=0.0%

Render Index: $R_a = 29.0$

| | | | | | | | |
|--------|--------|--------|-------|--------|--------|--------|-------|
| R1 =11 | R2 =79 | R3 =34 | R4 =0 | R5 =7 | R6 =91 | R7 =10 | |
| R8 =0 | R9 =0 | R10=73 | R11=0 | R12=78 | R13=33 | R14=62 | R15=0 |

Photometric & Radiometric Quantities

Flux = 89.366 lm Eff. : 21.91 lm/W Fe = 418.05 mW

Electrical parameters

V = 12.00 V I = 0.3400 A P = 4.079 W PF = 1.000

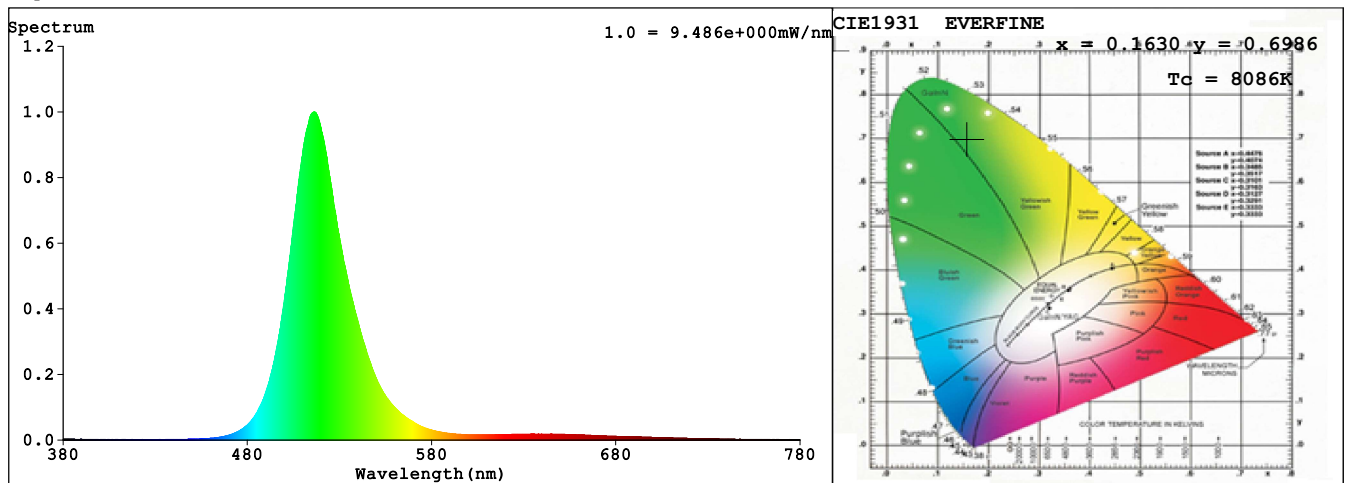
Spectrum Test Report

| | | |
|-------------------|---------------|---------------------|
| Sample : | Date : | 2020-08-12 13:23:44 |
| Specification : | Sam. Status : | |
| Sample No. : #1-G | Instrument : | HaasSuite(EVERFINE) |
| Manufacturer : | Test by : | L |

Test Condition

| | | | |
|---------------|-------------|------------|-------------|
| Temperature : | Deg | RH : | % |
| WL Range : | 380nm-780nm | IP : | 56248 (86%) |
| Test Mode : | Fast Test | T : | 713 ms |
| | | Delicacy : | Low |

Spectrum



Spectral Distribution

CIE1931 Chromaticity Diagram

Colorimetric Quantities

Chromaticity Coordinate: $x = 0.1630$ $y = 0.6986$ / $u' = 0.0590$ $v' = 0.5686$ ($duv=1.56e-01$)

Tc= 8086K Prcp WL: $\lambda_d=523.4nm$ Purity=73.5%

Peak WL: $\lambda_p=516nm$ Half Width: $\Delta\lambda_p=32.3nm$ Ratio:R=1.3% G=96.3% B=2.4%

Render Index: Ra = 0.0

| | | | | | | |
|-------|-------|-------|-------|-------|-------|--------------|
| R1 =0 | R2 =0 | R3 =0 | R4 =0 | R5 =0 | R6 =0 | R7 =0 |
| R8 =0 | R9 =0 | R10=0 | R11=0 | R12=0 | R13=0 | R14=42 R15=0 |

Photometric & Radiometric Quantities

Flux = 163.04 lm Eff. : 35.55 lm/W Fe = 372.66 mW

Electrical parameters

V = 12.00 V I = 0.3822 A P = 4.586 W PF = 1.000

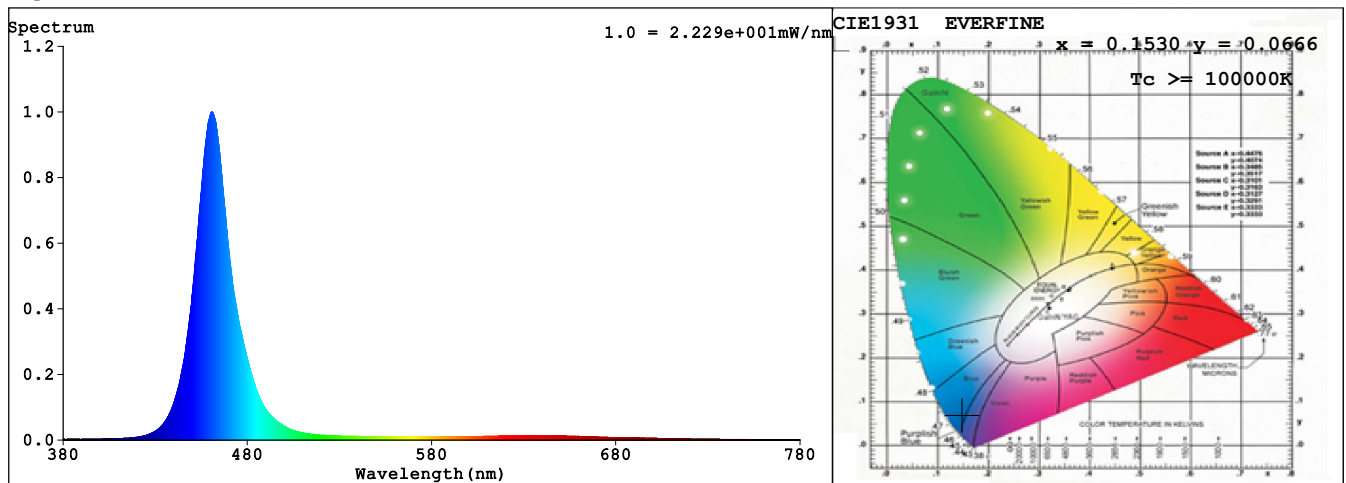
Spectrum Test Report

| | | | |
|---------------|--------|-------------|-----------------------|
| Sample | : | Date | : 2020-08-12 13:24:21 |
| Specification | : | Sam. Status | : |
| Sample No. | : #1-B | Instrument | : HaasSuite(EVERFINE) |
| Manufacturer | : | Test by | : L |

Test Condition

| | | | |
|-------------|---------------|----------|---------------|
| Temperature | : Deg | RH | : % |
| WL Range | : 380nm-780nm | IP | : 50862 (78%) |
| Test Mode | : Fast Test | T | : 356 ms |
| | | Delicacy | : Low |

Spectrum



Spectral Distribution

CIE1931 Chromaticity Diagram

Colorimetric Quantities

Chromaticity Coordinate: $x = 0.1530$ $y = 0.0666$ / $u' = 0.1752$ $v' = 0.1716$ ($duv=1.52e-01$)

$T_c \geq 1000000K$ Prcp WL: $\lambda_d=465.1nm$ Purity=91.0%

Peak WL: $\lambda_p=461nm$ Half Width: $\Delta\lambda_p=20.5nm$ Ratio: R=7.6% G=32.0% B=60.4%

Render Index: $R_a = 17.1$

| | | | | | | | |
|--------|--------|-------|-------|--------|--------|-------|--------|
| R1 =68 | R2 =0 | R3 =0 | R4 =0 | R5 =69 | R6 =0 | R7 =0 | |
| R8 =0 | R9 =18 | R10=0 | R11=0 | R12=0 | R13=27 | R14=0 | R15=55 |

Photometric & Radiometric Quantities

Flux = 46.455 lm Eff. : 10.34 lm/W Fe = 606.55 mW

Electrical parameters

V = 12.00 V I = 0.3743 A P = 4.491 W PF = 1.000

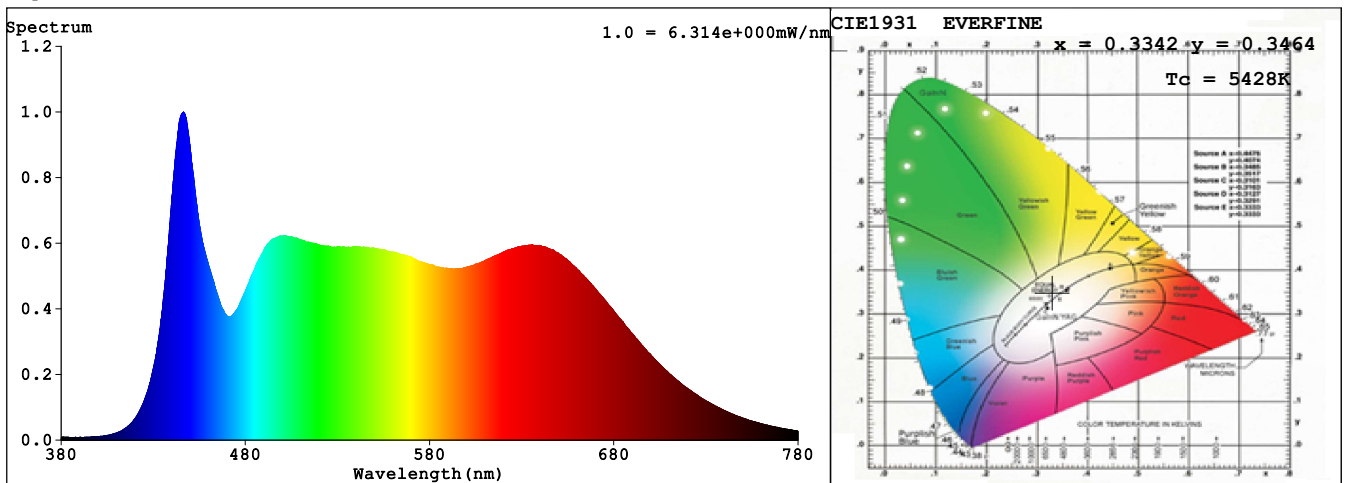
Spectrum Test Report

| | | |
|--------------------|---------------|---------------------|
| Sample : | Date : | 2020-08-12 13:12:02 |
| Specification : | Sam. Status : | |
| Sample No. : #1-CW | Instrument : | HaasSuite(EVERFINE) |
| Manufacturer : | Test by : | L |

Test Condition

| | |
|------------------------|------------------|
| Temperature : Deg | RH : % |
| WL Range : 380nm-780nm | IP : 54821 (84%) |
| Test Mode : Fast Test | T : 1568 ms |
| | Delicacy : Low |

Spectrum



Spectral Distribution

CIE1931 Chromaticity Diagram

Colorimetric Quantities

Chromaticity Coordinate: $x = 0.3342$ $y = 0.3464$ / $u' = 0.2060$ $v' = 0.4805$ ($duv=1.94e-03$)

$T_c = 5428K$ Prcp WL: $\lambda_d = 557.2nm$ Purity=4.2%

Peak WL: $\lambda_p = 446nm$ Half Width: $\Delta\lambda_p = 25.2nm$ Ratio: R=18.5% G=75.8% B=5.8%

Render Index: $R_a = 97.0$

| | | | | | | | |
|--------|---------|--------|--------|--------|--------|--------|--------|
| R1 =97 | R2 =100 | R3 =97 | R4 =95 | R5 =97 | R6 =98 | R7 =97 | |
| R8 =95 | R9 =87 | R10=99 | R11=92 | R12=92 | R13=98 | R14=98 | R15=96 |

Photometric & Radiometric Quantities

Flux = 254.23 lm Eff. : 53.51 lm/W Fe = 970.26 mW

Electrical parameters

V = 12.00 V I = 0.3960 A P = 4.751 W PF = 1.000

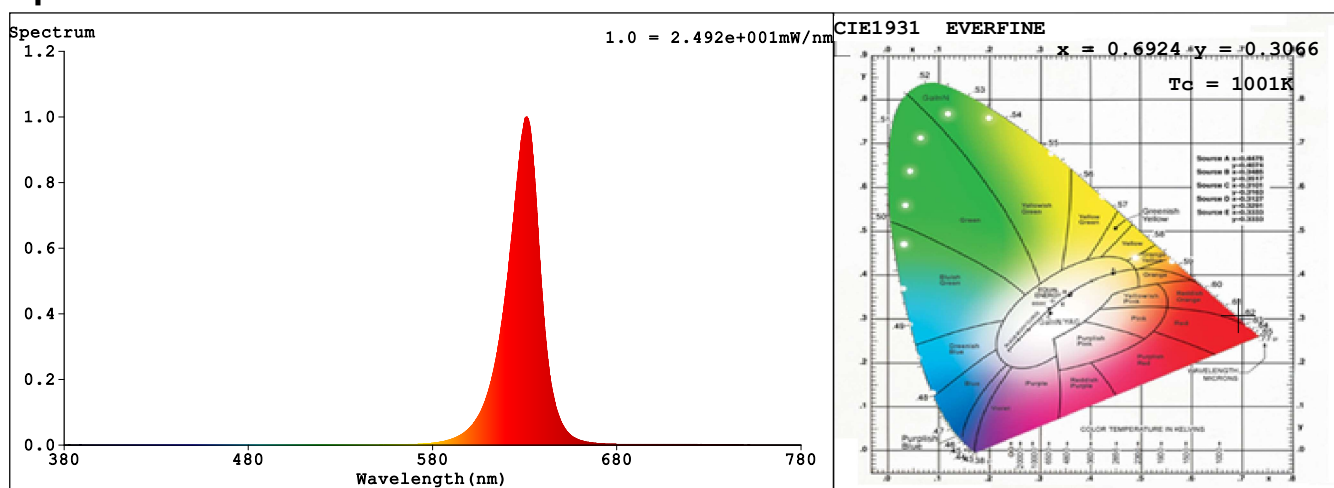
Spectrum Test Report

| | | |
|-------------------|---------------|---------------------|
| Sample : | Date : | 2020-08-12 13:13:01 |
| Specification : | Sam. Status : | |
| Sample No. : #1-R | Instrument : | HaasSuite(EVERFINE) |
| Manufacturer : | Test by : | L |

Test Condition

| | |
|------------------------|------------------|
| Temperature : Deg | RH : % |
| WL Range : 380nm-780nm | IP : 53301 (81%) |
| Test Mode : Fast Test | T : 261 ms |
| | Delicacy : Low |

Spectrum



Spectral Distribution

CIE1931 Chromaticity Diagram

Colorimetric Quantities

Chromaticity Coordinate: $x = 0.6924$ $y = 0.3066$ / $u' = 0.5231$ $v' = 0.5212$ ($duv = -7.56e-02$)
 $T_c = 1001K$ Prcp WL: $\lambda_d = 620.9nm$ Purity=99.7%
 Peak WL: $\lambda_p = 631nm$ Half Width: $\Delta\lambda_p = 18.5nm$ Ratio: R=95.6% G=4.4% B=0.0%

Render Index: $R_a = 29.3$

| | | | | | | | |
|--------|--------|--------|-------|--------|--------|--------|-------|
| R1 =11 | R2 =79 | R3 =35 | R4 =0 | R5 =7 | R6 =91 | R7 =11 | |
| R8 =0 | R9 =0 | R10=73 | R11=0 | R12=79 | R13=33 | R14=62 | R15=0 |

Photometric & Radiometric Quantities

Flux = 109.26 lm Eff. : 28.00 lm/W Fe = 539.98 mW

Electrical parameters

V = 12.00 V I = 0.3252 A P = 3.902 W PF = 1.000

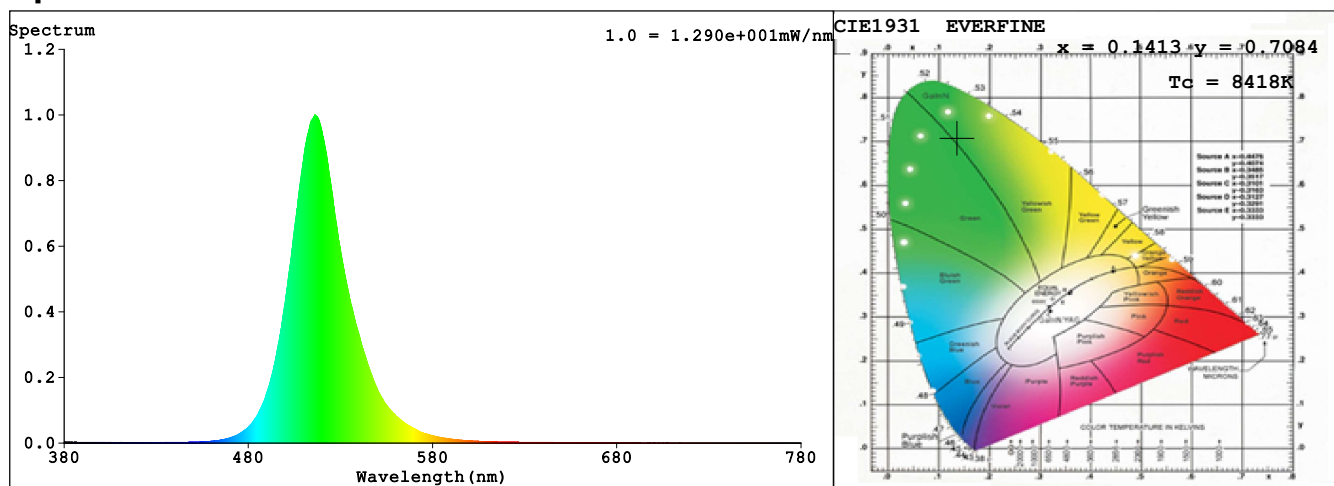
Spectrum Test Report

| | | |
|-------------------|---------------|---------------------|
| Sample : | Date : | 2020-08-12 13:13:46 |
| Specification : | Sam. Status : | |
| Sample No. : #1-G | Instrument : | HaasSuite(EVERFINE) |
| Manufacturer : | Test by : | L |

Test Condition

| | | | |
|---------------|-------------|------------|-------------|
| Temperature : | Deg | RH : | % |
| WL Range : | 380nm-780nm | IP : | 56549 (86%) |
| Test Mode : | Fast Test | T : | 527 ms |
| | | Delicacy : | Low |

Spectrum



Spectral Distribution

CIE1931 Chromaticity Diagram

Colorimetric Quantities

Chromaticity Coordinate: $x = 0.1413$ $y = 0.7084$ / $u' = 0.0504$ $v' = 0.5683$ ($duv=1.64e-01$)
 $T_c = 8418K$ Prcp WL: $\lambda_d = 520.4nm$ Purity=74.9%
 Peak WL: $\lambda_p = 516nm$ Half Width: $\Delta\lambda_p = 31.2nm$ Ratio: R=0.3% G=97.0% B=2.7%

Render Index: $R_a = 0.0$

| | | | | | | |
|-------|-------|-------|-------|-------|-------|--------------|
| R1 =0 | R2 =0 | R3 =0 | R4 =0 | R5 =0 | R6 =0 | R7 =0 |
| R8 =0 | R9 =0 | R10=0 | R11=0 | R12=0 | R13=0 | R14=40 R15=0 |

Photometric & Radiometric Quantities

Flux = 209.01 lm Eff. : 60.17 lm/W Fe = 471.28 mW

Electrical parameters

V = 12.00 V I = 0.2895 A P = 3.473 W PF = 1.000

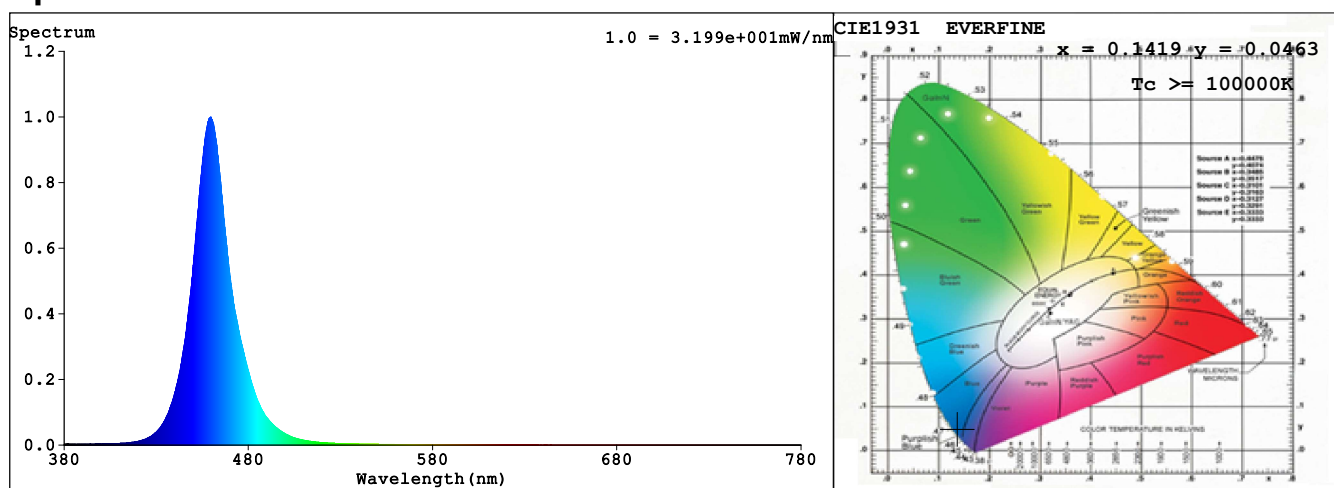
Spectrum Test Report

| | | |
|-------------------|---------------|---------------------|
| Sample : | Date : | 2020-08-12 13:14:19 |
| Specification : | Sam. Status : | |
| Sample No. : #1-B | Instrument : | HaasSuite(EVERFINE) |
| Manufacturer : | Test by : | L |

Test Condition

| | |
|------------------------|------------------|
| Temperature : Deg | RH : % |
| WL Range : 380nm-780nm | IP : 53363 (81%) |
| Test Mode : Fast Test | T : 263 ms |
| | Delicacy : Low |

Spectrum



Spectral Distribution

CIE1931 Chromaticity Diagram

Colorimetric Quantities

Chromaticity Coordinate: $x = 0.1419$ $y = 0.0463$ / $u' = 0.1735$ $v' = 0.1273$ ($duv=1.81e-01$)
 $T_c \geq 1000000K$ Prcp WL: $\lambda_d = 464.4nm$ Purity=97.3%
 Peak WL: $\lambda_p = 460nm$ Half Width: $\Delta\lambda_p = 21.1nm$ Ratio: R=0.6% G=16.0% B=83.5%

Render Index: $R_a = 0.4$

| | | | | | | | |
|--------|--------|---------|---------|---------|---------|---------|---------|
| R1 = 0 | R2 = 0 | R3 = 0 | R4 = 0 | R5 = 3 | R6 = 0 | R7 = 0 | |
| R8 = 0 | R9 = 0 | R10 = 0 | R11 = 0 | R12 = 0 | R13 = 0 | R14 = 0 | R15 = 3 |

Photometric & Radiometric Quantities

Flux = 46.637 lm Eff. : 13.02 lm/W Fe = 829.53 mW

Electrical parameters

V = 12.00 V I = 0.2985 A P = 3.581 W PF = 1.000