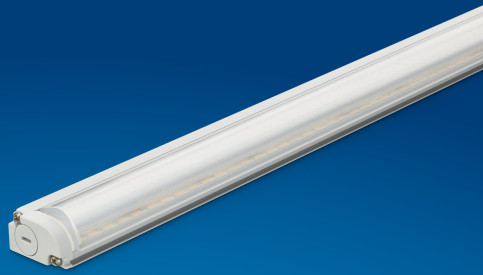


# PHILIPS

## InteGrade

### LED

InteGrade engine UB  
value PW G4



## Datasheet

### Key features and benefits

- Miniaturized slim design for aesthetic integration
- Premium color consistency up to 3SDCM over lifetime
- Natural merchandise color with specially formulated LEDs up to CRI95
- State of the Art LED diode delivering up to 190 lm/W
- Modules performing up to 137 lm/w meeting SLR (Single Lighting Regulation)
- Optical design for uniform light distribution bringing light right down to the lowest shelf
- Unique Premium White light for brightest whites and outstanding merchandize attractiveness
- Maximum design flexibility with extensive range of engine lengths
- Color temperatures (3000 PW, 4000 PW)
- True System proposition with five-year system warranty with Philips LED Power Drivers
- Reduced power consumption for energy saving
- Long lifetime: >50,000 hours
- Dimmable

September 2021



## Ordering data

| Commercial product name                 | EOC               | 12NC           | Box quantity |
|-----------------------------------------|-------------------|----------------|--------------|
| InteGrade engine UB Va 855mm 930 PW G4  | 8718699 742942 00 | 9290 021 59706 | 24           |
| InteGrade engine UB Va 855mm 940 PW G4  | 8718699 742966 00 | 9290 021 59806 | 24           |
| InteGrade engine UB Va 1150mm 930 PW G4 | 8718699 742980 00 | 9290 021 59906 | 24           |
| InteGrade engine UB Va 1150mm 940 PW G4 | 8718699 743000 00 | 9290 021 60006 | 24           |

## Key Specifications at Nominal conditions

| Name                                    | 12NC           | Power (W) | Luminous Flux (lm) | Useful Flux (lm) | CRI |
|-----------------------------------------|----------------|-----------|--------------------|------------------|-----|
| InteGrade engine UB Va 855mm 930 PW G4  | 9290 021 59706 | 7.83      | 939                | 808              | 94  |
| InteGrade engine UB Va 855mm 940 PW G4  | 9290 021 59806 | 7.78      | 1045               | 899              | 94  |
| InteGrade engine UB Va 1150mm 930 PW G4 | 9290 021 59906 | 10.0      | 1221               | 1050             | 94  |
| InteGrade engine UB Va 1150mm 940 PW G4 | 9290 021 60006 | 9.92      | 1357               | 1167             | 94  |

## Module temperatures

| Parameter                            | Nominal* | Life** | Max*** | Unit |
|--------------------------------------|----------|--------|--------|------|
| T <sub>a</sub> (ambient temperature) | 25       | 30     | 50     | °C   |

\* Nominal value at which typical performance is specified

\*\* Value at which life time is specified

\*\*\* Maximum value for safe operation, do not operate above this value

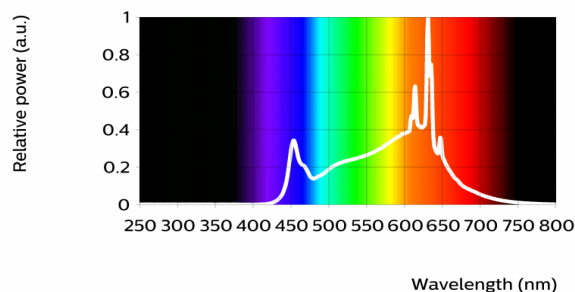
## Optical characteristics - table per color (CCT)

### InteGrade engine UB Va 855mm 930 PW G4

| Parameter                          | Min | Typ            | Max           | Unit |
|------------------------------------|-----|----------------|---------------|------|
| Luminous flux                      | 869 | 939            | 1127          | lm   |
| Flux within 120° cone              |     | 808            |               | lm   |
| Module efficacy                    |     | 120            |               | lm/W |
| Correlated color temperature (CCT) |     | 3000           |               | K    |
| Color coordinates (CIEx, CIEy)     |     | (0.419, 0.381) |               | -    |
| Color consistency                  |     |                | 3             | SDCM |
| CRI                                | 92  | 94             |               |      |
| R9                                 | 75  |                |               |      |
| Photometric code                   |     | 930/359        |               |      |
| Radiation angle                    |     | 27             |               | deg  |
| Peak intensity                     |     | 699            |               | cd   |
| Photobiological safety             |     |                | RG1 unlimited |      |



Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5

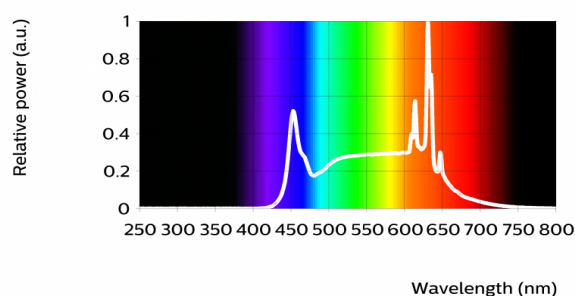


### InteGrade engine UB Va 855mm 940 PW G4

| Parameter                          | Min | Typ            | Max           | Unit |
|------------------------------------|-----|----------------|---------------|------|
| Luminous flux                      | 967 | 1045           | 1254          | lm   |
| Flux within 120° cone              |     | 899            |               | lm   |
| Module efficacy                    |     | 134            |               | lm/W |
| Correlated color temperature (CCT) |     | 4000           |               | K    |
| Color coordinates (CIEx, CIEy)     |     | (0.372, 0.359) |               | -    |
| Color consistency                  |     |                | 3             | SDCM |
| CRI                                | 92  | 94             |               |      |
| R9                                 | 85  |                |               |      |
| Photometric code                   |     | 940/359        |               |      |
| Radiation angle                    |     | 27             |               | deg  |
| Peak intensity                     |     | 777            |               | cd   |
| Photobiological safety             |     |                | RG1 unlimited |      |



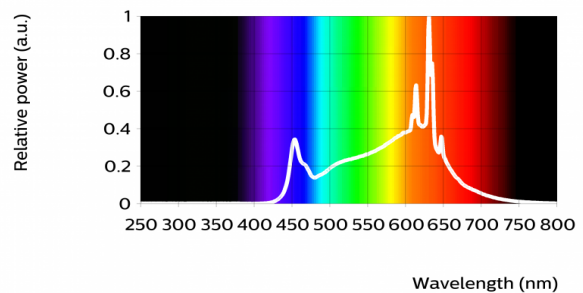
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



## InteGrade engine UB Va 1150mm 930 PW G4

| Parameter                          | Min  | Typ            | Max           | Unit |
|------------------------------------|------|----------------|---------------|------|
| Luminous flux                      | 1129 | 1221           | 1465          | lm   |
| Flux within 120° cone              |      | 1050           |               | lm   |
| Module efficacy                    |      | 122            |               | lm/W |
| Correlated color temperature (CCT) |      | 3000           |               | K    |
| Color coordinates (CIEx, CIEy)     |      | (0.419, 0.381) |               | -    |
| Color consistency                  |      |                | 3             | SDCM |
| CRI                                | 92   | 94             |               |      |
| R9                                 | 75   |                |               |      |
| Photometric code                   |      | 930/359        |               |      |
| Radiation angle                    |      | 27             |               | deg  |
| Peak intensity                     |      | 908            |               | cd   |
| Photobiological safety             |      |                | RG1 unlimited |      |

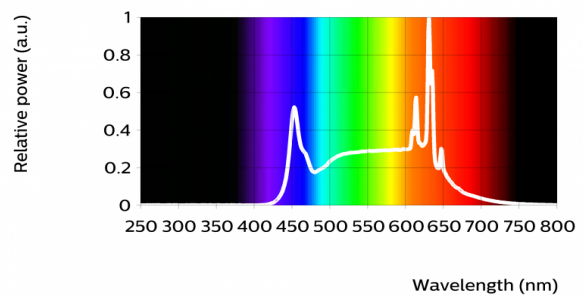
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



## InteGrade engine UB Va 1150mm 940 PW G4

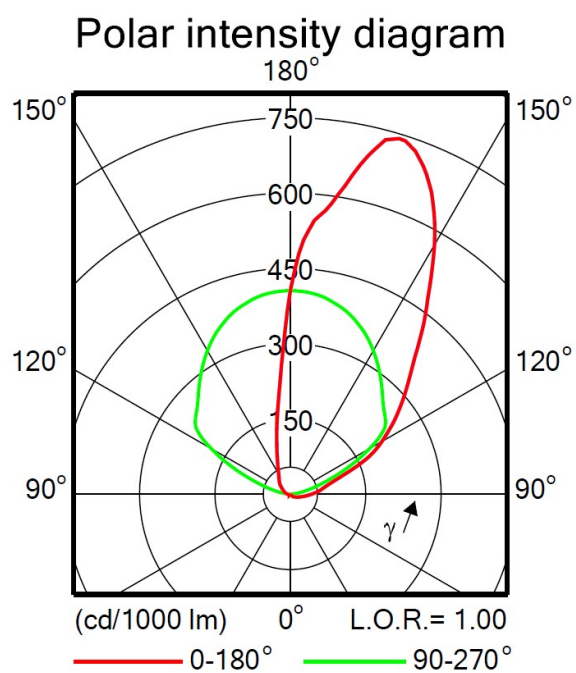
| Parameter                          | Min  | Typ            | Max           | Unit |
|------------------------------------|------|----------------|---------------|------|
| Luminous flux                      | 1255 | 1357           | 1629          | lm   |
| Flux within 120° cone              |      | 1167           |               | lm   |
| Module efficacy                    |      | 137            |               | lm/W |
| Correlated color temperature (CCT) |      | 4000           |               | K    |
| Color coordinates (CIEx, CIEy)     |      | (0.372, 0.359) |               | -    |
| Color consistency                  |      |                | 3             | SDCM |
| CRI                                | 92   | 94             |               |      |
| R9                                 | 85   |                |               |      |
| Photometric code                   |      | 940/359        |               |      |
| Radiation angle                    |      | 27             |               | deg  |
| Peak intensity                     |      | 1009           |               | cd   |
| Photobiological safety             |      |                | RG1 unlimited |      |

Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



## Beam shape

Light distribution, scaled to cd per 1000lm



## Electrical characteristics

### InteGrade engine UB Va 855mm 930 PW G4

| Parameter                   | Min | Typ  | Max | Unit          |
|-----------------------------|-----|------|-----|---------------|
| Forward voltage             |     | 24.0 |     | V             |
| Power consumption           |     | 7.83 |     | W = kWh/1000h |
| Number of modules per chain |     |      | 4   |               |

### InteGrade engine UB Va 855mm 940 PW G4

| Parameter                   | Min | Typ  | Max | Unit          |
|-----------------------------|-----|------|-----|---------------|
| Forward voltage             |     | 24.0 |     | V             |
| Power consumption           |     | 7.78 |     | W = kWh/1000h |
| Number of modules per chain |     |      | 4   |               |

### InteGrade engine UB Va 1150mm 930 PW G4

| Parameter                   | Min | Typ  | Max | Unit          |
|-----------------------------|-----|------|-----|---------------|
| Forward voltage             |     | 24.0 |     | V             |
| Power consumption           |     | 10.0 |     | W = kWh/1000h |
| Number of modules per chain |     |      | 3   |               |

### InteGrade engine UB Va 1150mm 940 PW G4

| Parameter                   | Min | Typ  | Max | Unit          |
|-----------------------------|-----|------|-----|---------------|
| Forward voltage             |     | 24.0 |     | V             |
| Power consumption           |     | 9.92 |     | W = kWh/1000h |
| Number of modules per chain |     |      | 3   |               |

## Lumen maintenance

| Operation point | Lumen maintenance<br>x 1000 hours | L70  |      |      | L80  |      |      |
|-----------------|-----------------------------------|------|------|------|------|------|------|
|                 |                                   | B50  | B20  | B10  | B50  | B20  | B10  |
|                 | Ta -20°C                          | >100 | >100 | >100 | >100 | >100 | >100 |
|                 | Ta 5°C                            | >100 | >100 | >100 | >100 | >100 | >100 |
|                 | Ta 30°C                           | >100 | >100 | >100 | >100 | >100 | >100 |

## Lifetime

| Parameter      | Value  | Unit  |
|----------------|--------|-------|
| M70F50 nominal | 100000 | hours |
| M70F50 life    | 100000 | hours |

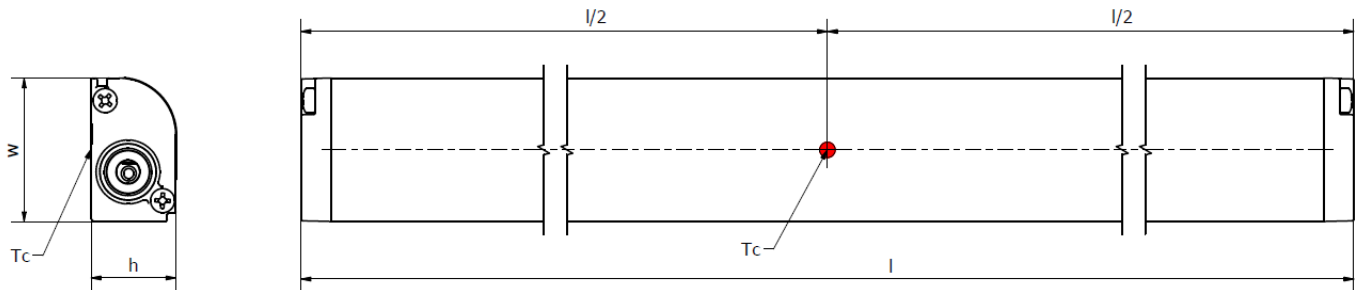
## Mechanical characteristics

InteGrade engine UB Va 855mm 930 PW G4

InteGrade engine UB Va 855mm 940 PW G4

| Parameter    | Min  | Typ  | Max  | Unit |
|--------------|------|------|------|------|
| Length       | 851  | 855  | 859  | mm   |
| Width        | 19.3 | 19.7 | 20.1 | mm   |
| Height total | 12.4 | 12.9 | 13.4 | mm   |
| Product mass |      | 180  |      | gram |

Thermal expansion from -30°C to +30°C is included in the tolerances

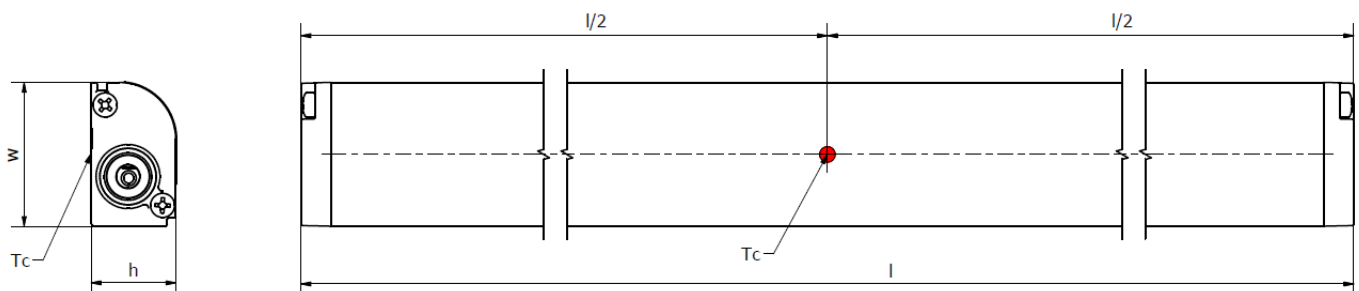


InteGrade engine UB Va 1150mm 930 PW G4

InteGrade engine UB Va 1150mm 940 PW G4

| Parameter    | Min  | Typ  | Max  | Unit |
|--------------|------|------|------|------|
| Length       | 1146 | 1150 | 1154 | mm   |
| Width        | 19.3 | 19.7 | 20.1 | mm   |
| Height total | 12.4 | 12.9 | 13.4 | mm   |
| Product mass |      | 230  |      | gram |

Thermal expansion from -30°C to +30°C is included in the tolerances



## Absolute ratings

| Parameter                 | Min | Max | Unit |
|---------------------------|-----|-----|------|
| Case temperature (Tc-max) |     | 70  | °C   |
| Ambient temperature       | -30 | 50  | °C   |

## Application information

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### Certificates and Standards

IEC/EN 62031

Relevant clauses of IEC/EN 60335-1

Annex BB of IEC/EN 60335-2-89

Annex CC of IEC/EN 60335-2-24

CSA C22.2 No.250.0-08

UL 2108

NSF

### Application

|                        |                                                                                 |
|------------------------|---------------------------------------------------------------------------------|
| IP rating              | No IP-rating, fit for use in coolers and freezers - suitable for damp locations |
| Overheating protection | No protection                                                                   |
| Luminaire class        | IEC Class III if connected to a SELV driver                                     |
| Dimming                | Yes                                                                             |

Do not use in highly polluted areas. Surface mounting only.



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