Spot On

DASGIP® PhotoBioreactor – For light-dependent cultivation applications
»Grow your cells and microorganisms under customized and variable lighting conditions.«
Light can influence the growth and behaviour of cells and organisms in different ways. Phototrophic organisms use light as an energy source. Photoreceptors mediate light-dependent regulation of enzymatic activity and gene expression. To address individual requirements, the DASGIP Parallel Bioreactor System for light-dependent applications enables illumination with selected wavelengths.

**Individual illumination**

With the DASGIP PBR4 Module, DASGIP PhotoBioreactors can be individually illuminated.

> Three channels reflect relevant chlorophyll absorption wavelengths:
  > Channel A: 660 nm, 780 nm
  > Channel B: 572 nm, 625 nm, 640 nm
  > Channel C: 453 nm

> By selectively varying the light intensities of the different wavelength channels, both the spectral composition and the overall intensity of the resulting light can be adjusted according to individual requirements.

> Continuous or flash mode with adjustable period and pulse width

> Simulation of day/night cycles

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**Components of a DASGIP Parallel Bioreactor System for light-dependent applications**

**DASGIP Parallel Bioreactor System**

> Parallel operation of up to 16 bioreactors
> Modular design of control units allows for flexible system configurations
> DASware® control software for advanced process control

**DASGIP PhotoBioreactor**

> Working volumes of 350 mL – 1.0 L and 750 mL – 2.6 L
> Up to four DASGIP LED Illumination Devices integrated
> Direct overhead drives with 30 – 1,250 rpm (100 – 1,600 rpm optional), pitched-blade impellers
> Sensors for pH, temperature, DO, redox potential, OD, level available

**DASGIP PBR4 Photo-Bioreactor Illumination Module**

> Parallel illumination of up to four photobioreactors with four DASGIP LED Illumination Devices per bioreactor
> Three different wavelengths channels

**DASGIP LED Illumination Device**

> For illumination of DASGIP PhotoBioreactors within the bioreactor
## Ordering information

<table>
<thead>
<tr>
<th>Description</th>
<th>Order no.</th>
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<tbody>
<tr>
<td><strong>DASGIP® PhotoBioreactor</strong></td>
<td></td>
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<tr>
<td>Vessel DR03P, pitched blade impeller, dip tube, 750 mL – 2.6 L, overhead drive, photobioreactor</td>
<td>76DR03P</td>
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<tr>
<td>Vessel DS10000DSP, 2x pitched blade impeller, 350 mL – 1.0 L, 2x GL45 side arms, overhead drive, photobioreactor</td>
<td>76DS10000DSP</td>
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<tr>
<td><strong>DASGIP® PBR4 PhotoBioreactor Illumination Module</strong></td>
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<tr>
<td>PhotoBioreactors Illumination Module, for 4 vessels, without LED Illumination Devices</td>
<td>76DGPBR4</td>
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<tr>
<td>Stand-Alone PhotoBioreactor Illumination Module, for 4 vessels, without LED Illumination Devices, incl. Easy-Access Software</td>
<td>76DMPBR4</td>
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<tr>
<td><strong>DASGIP® Illumination Device</strong></td>
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<tr>
<td>LED Stick, L 235 mm, O.D. 12 mm, universal wavelength 453/572/625/640/660/780 nm</td>
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<tr>
<td>LED Stick, L 235 mm, O.D. 12 mm, type B, WL 365/453/660/735 nm</td>
<td>78525311</td>
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