



**TURNKEY SOLUTION FOR FAST UV CURE  
ADHESIVE**

**1** Company Introduction

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**2** Example Application

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**3** Portfolio Overview

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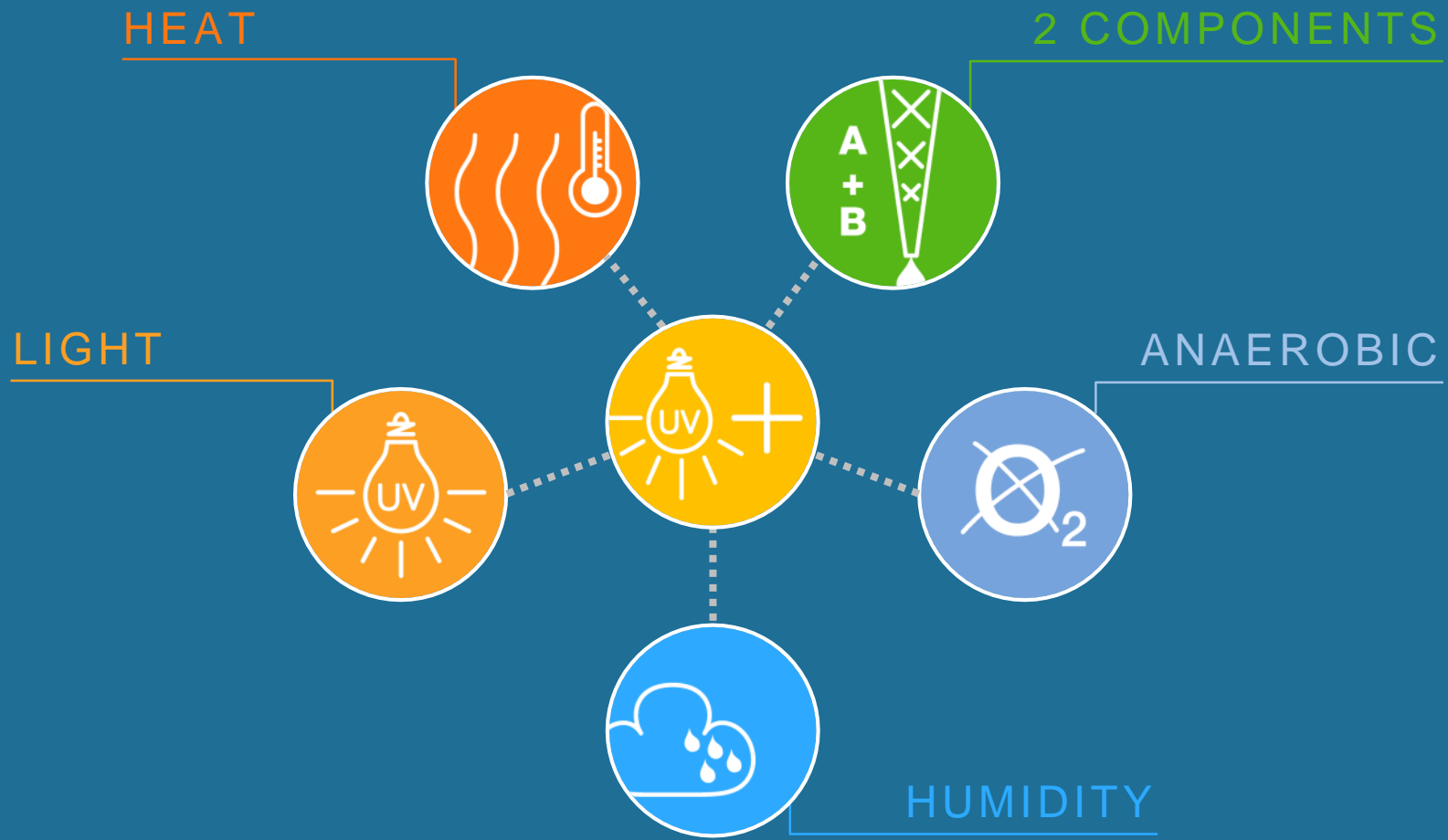
FAMILY-  
OWNED

€ 205 M.  
REVENUES

1,000  
EMPLOYEES







# CURING MECHANISMS

DUAL CURING FOR HIGHER PRODUCTION RATE



Electrically Conductive Adhesive



Dispense 200um Drops < 1 Second



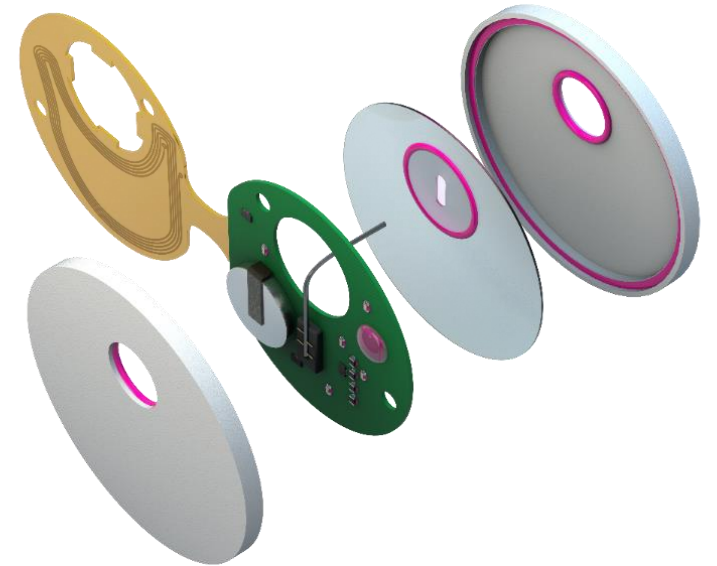
No Satellites and Bubble-Free



Fast UV Fixation <1 Second



Turn Key Solution!





HOW TO DISPENSE?



## JETTING

Smallest Dots

Contactless Dispensing  
300 Hz – Fast Dispensing  
Adaptable and Stable Process



## RETRACTION VALVE

Simple and Repeatable

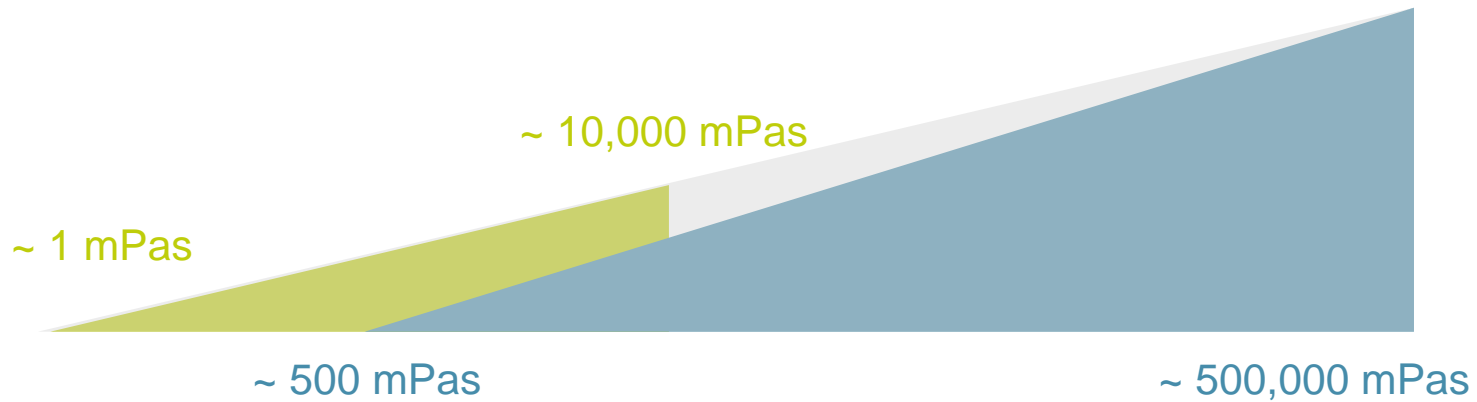
Stable Dispensing  
No Dripping  
Constant Adhesive Bead – No Tailing



DELO-DOT PN5 LV

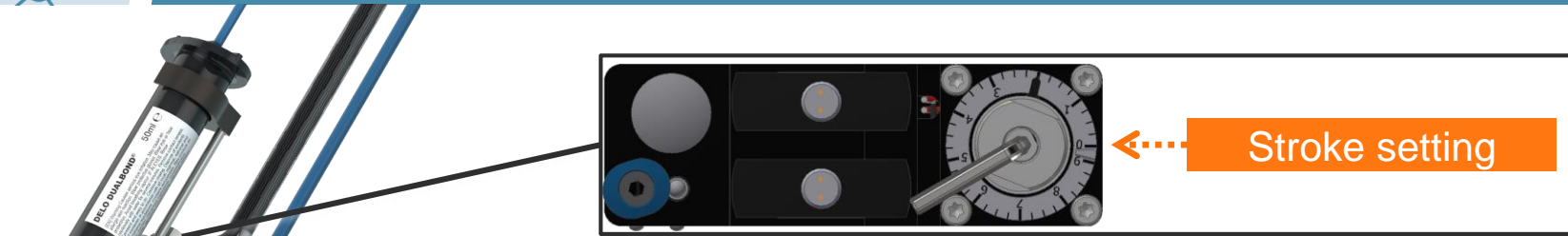


DELO-DOT PN5

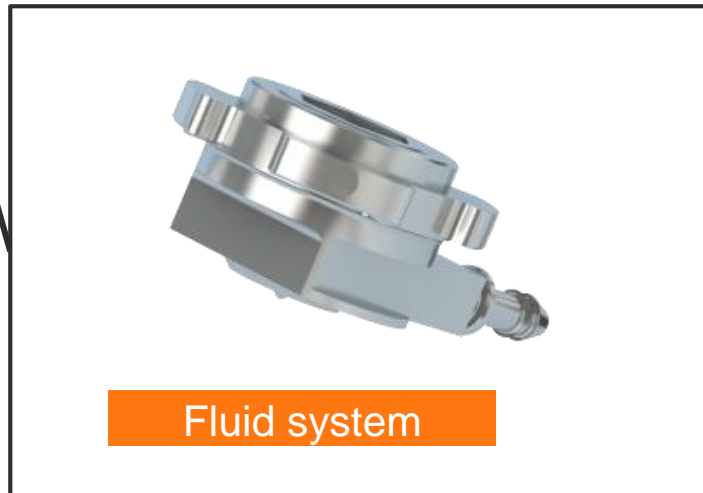


Full range of viscosities covered by the DELO-DOT PN5 family

## DELO-DOT PN5 Overview



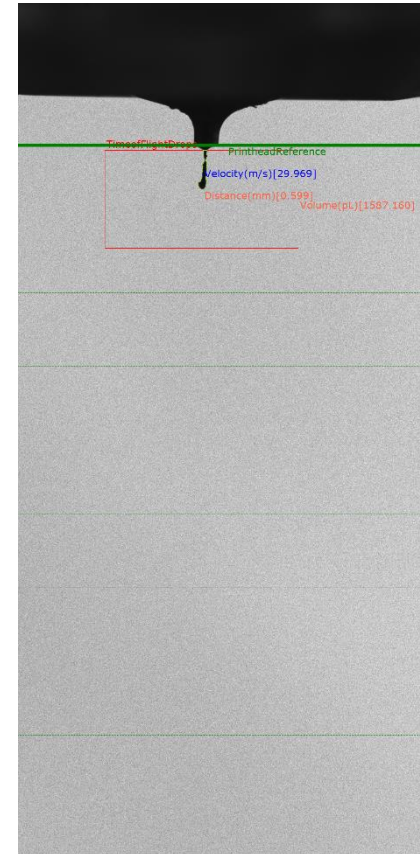
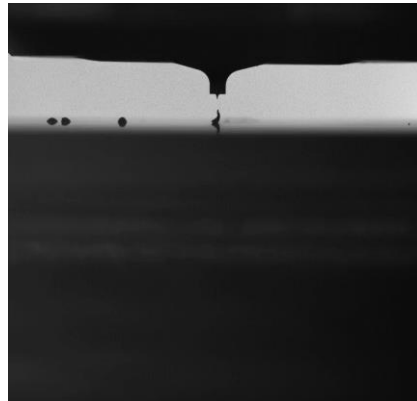
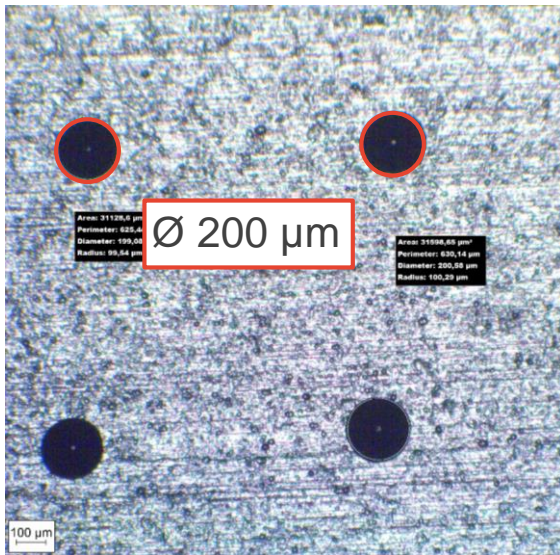
- ▶ Broad range of viscosity due to stepless stroke setting
- ▶ No special tools required
- ▶ Strict separation of actor and fluidic
- ▶ Quick nozzle change due to bayonet lock without tools
- ▶ Normally closed → Low risk of leaking
- ▶ Competitively Price!



- ▶ Dual Cure Conductive Adhesive

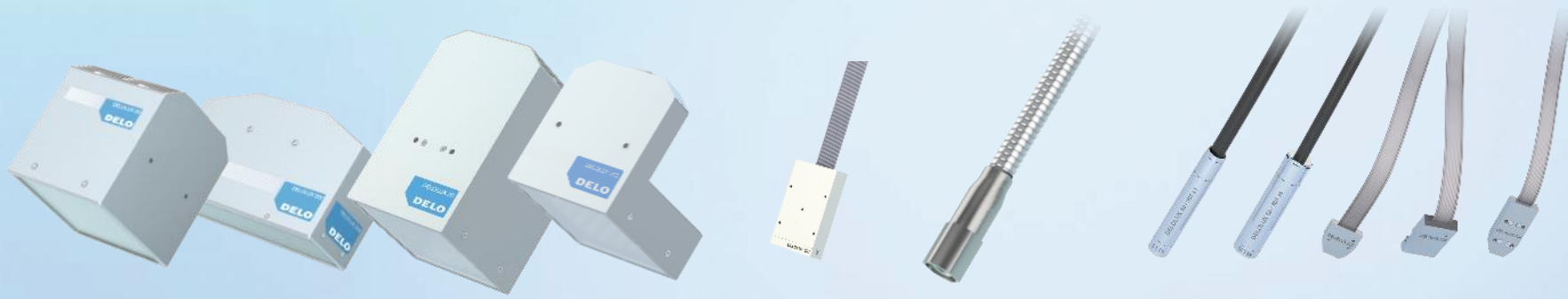
- ▶ Diameter: 200  $\mu\text{m}$
- ▶ Drop Volume: 1.6 nl

- ▶ Stable jetting
  - » 10,000 drops without wiping
- ▶ Bubble-free
- ▶ Few satellites



- ▶ Velocity ~ 23 m/s





TIME FOR UV FIXATION



## Dimensions

(D × L)

- 30 mm × 86 mm

## Cable type

- Flat ribbon cable with 450 mm length

## Intensity

- 365 nm: 13.5 W/cm<sup>2</sup> @ 2 mm
- 400 nm: 22.5 W/cm<sup>2</sup> @ 2 mm

## Light exit area

- Ø 22 mm

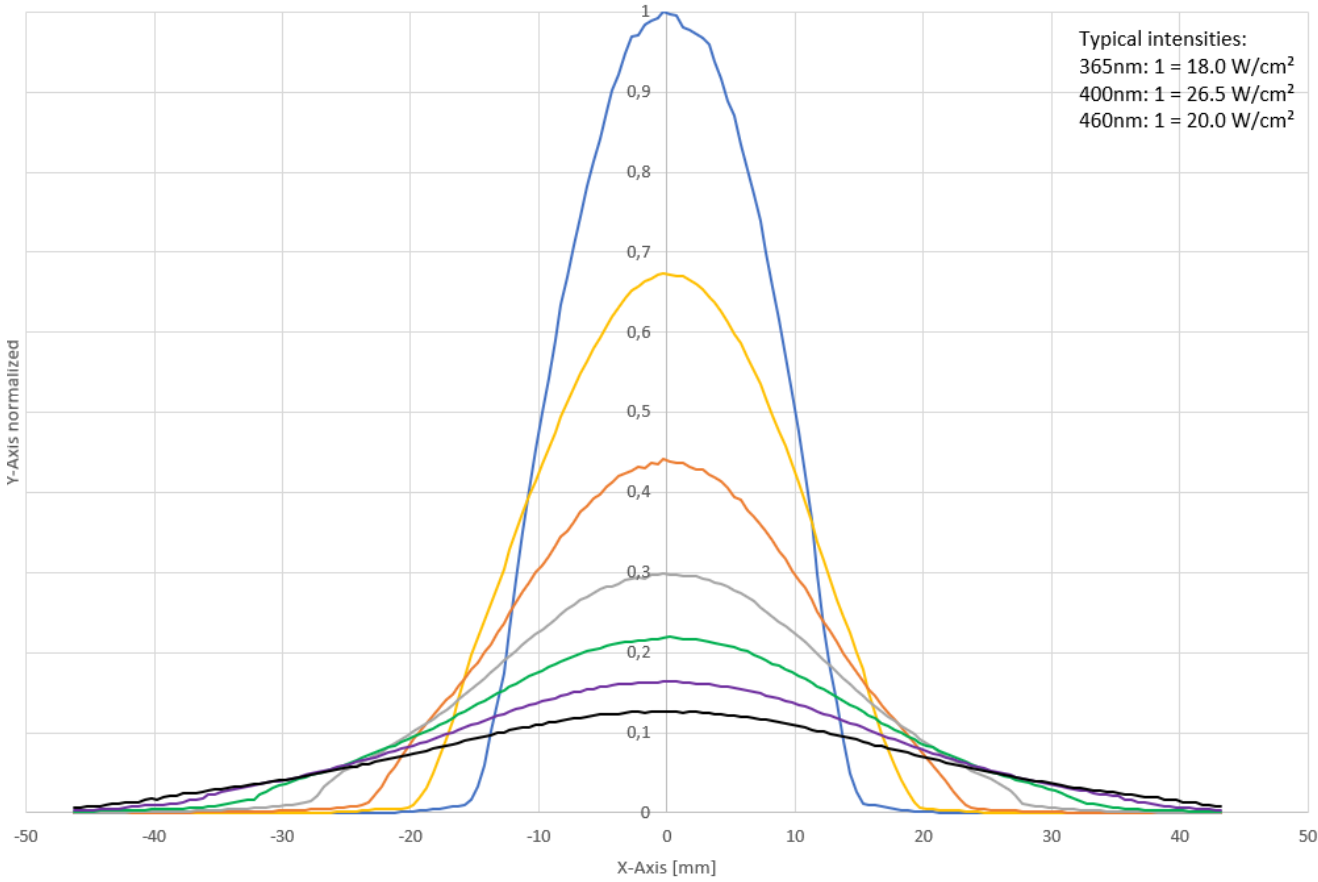
## Wavelength

- 365 nm
- 400 nm
- 460 nm

## Weight

- 220 g

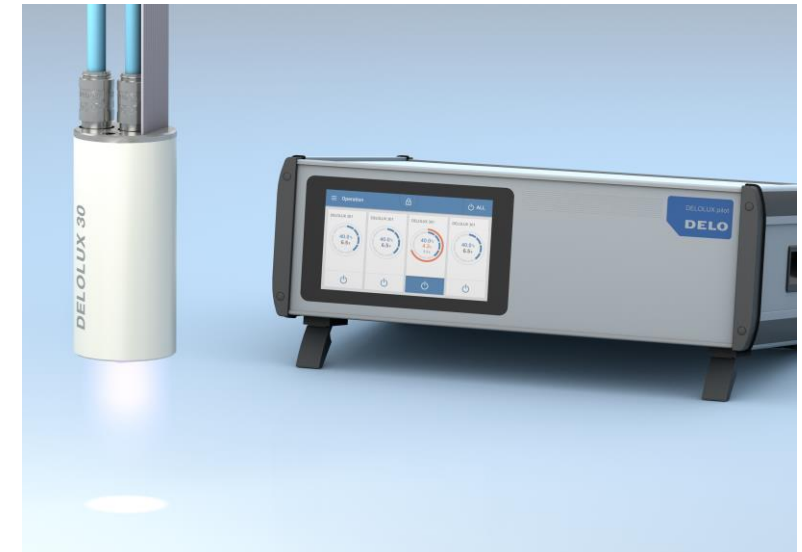
### DELOLUX 30 - 365/400/460nm



## Fast Facts

- ▶ UV Fixation <1 Second!
- ▶ Optional Integrated Water Chiller
- ▶ High Intensity > 26.5 W/cm<sup>2</sup>
- ▶ PLC Integratable or Standalone Device
- ▶ Uniform Light Distribution

- 0,1mm
- 5mm
- 10mm
- 15mm
- 20mm
- 25mm
- 30mm





## DELOLUX 20

Version: A1 / A2 / A4



## DELOLUX 202

Version: A1 / A2 / A4

<b>Description</b>	High-intensity area lamp for even irradiation	High-intensity area lamp for even irradiation
<b>Dimensions of lamp head</b>	A1 / A2: 112 mm x 112 mm x 121 mm A4: 112 mm x 112 mm x 180 mm	A1 / A2: 209 mm x 67 mm x 121 mm A4: 209 mm x 67 mm x 180 mm
<b>Light exit area</b>	100 mm x 100 mm	202 mm x 49 mm
<b>Wavelength / typical intensity</b>	<p>365 nm (A1): <math>\geq 600 \text{ mW/cm}^2 @ 2 \text{ mm}</math>                      365 nm (A2): <math>\geq 1,200 \text{ mW/cm}^2 @ 2 \text{ mm}</math>                      365 nm (A4): <math>\geq 2,400 \text{ mW/cm}^2 @ 2 \text{ mm}</math>                      400 nm (A1): <math>\geq 1,000 \text{ mW/cm}^2 @ 2 \text{ mm}</math>                      400 nm (A2): <math>\geq 2,000 \text{ mW/cm}^2 @ 2 \text{ mm}</math>                      400 nm (A4): <math>\geq 4,000 \text{ mW/cm}^2 @ 2 \text{ mm}</math>                      460 nm (A1): <math>\geq 800 \text{ mW/cm}^2 @ 2 \text{ mm}</math>                      460 nm (A2): <math>\geq 1,600 \text{ mW/cm}^2 @ 2 \text{ mm}</math>                      Mixed wavelength lamp head 365 nm &amp; 400 nm (A4):  <math>\geq 1,200 \text{ mW/cm}^2 (365 \text{ nm}); \geq 2,000 \text{ mW/cm}^2 (400 \text{ nm}) @ 2 \text{ mm}</math></p>	
<b>Cooling mechanism</b>	Active air cooling	Active air cooling
<b>Control</b>	DELOLUX pilot and optional downstream PLC	DELOLUX pilot and optional downstream PLC





## DELOLUX 203

Version: A1 / A2

## DELOLUX 204

Version: A4

<b>Description</b>	High-intensity area lamp for even irradiation	High-intensity area lamp for even irradiation
<b>Dimensions of lamp head</b>	112 mm x 112 x 121 mm	112 mm x 112 mm x 106.5 mm
<b>Light exit area</b>	100 mm x 100 mm	100 mm x 100 mm
<b>Wavelength / typical intensity</b>	365 nm (A1): $\geq 600 \text{ mW/cm}^2 @ 2 \text{ mm}$ 365 nm (A2): $\geq 1.200 \text{ mW/cm}^2 @ 2 \text{ mm}$	Mixed wavelength lamp head 365 nm & 400 nm (A4): $\geq 1,200 \text{ mW/cm}^2 (365 \text{ nm});$ $\geq 2,000 \text{ mW/cm}^2 (400 \text{ nm}) @ 2 \text{ mm}$
<b>Cooling mechanism</b>	Via external cooling profile (liquid or passive)	Integrated water cooling profile
<b>Control</b>	DELOLUX pilot and optional downstream PLC	DELOLUX pilot and optional downstream PLC



## DELOLUX 50

## DELOLUX 505

<b>Description</b>	High-intensity spot light source	High-intensity spot light source, specialized for higher working distances
<b>Dimensions of lamp head</b>	x1: 12 mm dia. x 71 mm x4: 15 mm dia. x 76 mm	Ø 12 mm x 64 mm
<b>Light exit area</b>	x1: 8.6 mm dia.* x4: 11.5 mm dia.*  * various optics available	Ø 10.0 mm*  * various optics available
<b>Wavelength / typical intensity</b>	365 nm x1: ≥ 18,000 mW/cm <sup>2</sup> @ 2 mm 365 nm x4: ≥ 3,500 mW/cm <sup>2</sup> @ 9 mm 400 nm x1: ≥ 15,000 mW/cm <sup>2</sup> @ 2 mm 400 nm x4: ≥ 7,000 mW/cm <sup>2</sup> @ 9 mm 460 nm x1: ≥ 14,000 mW/cm <sup>2</sup> @ 2 mm	365 nm: ≥ 7,950 mW/cm <sup>2</sup> @ 10 mm 400 nm: ≥ 10,500 mW/cm <sup>2</sup> @ 10 mm
<b>Cooling mechanism</b>	Passively cooled, heat sink in lamp head	Passively cooled, heat sink in lamp head
<b>Control</b>	DELOLUX pilot and optional downstream PLC	DELOLUX pilot and optional downstream PLC

# Application-specific lamps

**DELO**



**DELOLUX 502**



**DELOLUX 503**



**DELOLUX 504**

<b>Description</b>	High-intensity spot light source	High-intensity spot light source	High-intensity spot light source
<b>Dimensions of lamp head</b>	20 mm x 4.9 mm x 21.3 mm	20 mm x 7 mm x 37 mm	20 mm x 7.3 mm x 42 mm
<b>Light exit area</b>	7 mm x 2 mm	10 mm x 3 mm	7 mm x 2 mm
<b>Wavelength / typical intensity</b>	365 nm: $\geq 1,350 \text{ mW/cm}^2 @ 6 \text{ mm}$	365 nm: $\geq 1,000 \text{ mW/cm}^2 @ 15 \text{ mm}$ 400 nm: $\geq 1,600 \text{ mW/cm}^2 @ 15 \text{ mm}$ 460 nm: $\geq 1,300 \text{ mW/cm}^2 @ 15 \text{ mm}$ 460 nm LP: $\geq 500 \text{ mW/cm}^2 @ 15 \text{ mm}$	365 nm: $\geq 5,200 \text{ mW/cm}^2 @ 6 \text{ mm}$ 400 nm: $\geq 7,500 \text{ mW/cm}^2 @ 6 \text{ mm}$
<b>Cooling mechanism</b>	Passively cooled, heat sink in lamp head	Passively cooled, heat sink in lamp head	Passively cooled, heat sink in lamp head
<b>Control</b>	DELOLUX pilot and optional downstream PLC	DELOLUX pilot and optional downstream PLC	DELOLUX pilot and optional downstream PLC
<b>Reliability</b>	Intensity measurement with DELOLUXcontrol	Intensity measurement with DELOLUXcontrol	Intensity measurement with DELOLUXcontrol

# LED base units

# DELO



**DELOLUX pilot AxT**



**DELOLUX pilot Axi / PROFINET**



**DELOLUX pilot S4T**



**DELOLUX pilot S4i**

<b>Description</b>	Control unit for DELOLUX 20 / DELOLUX 202 series	Switch cabinet version of control unit for DELOLUX 20 / DELOLUX 202 series	Control unit for DELOLUX 50 series	Switch cabinet version of control unit for DELOLUX 50 series
<b>Automatic temperature compensation</b>			max. ± 2 % intensity deviation	
<b>Dimensions (W × H × D)</b>	440 mm × 305 mm × 153 mm	A1i / A1i PROFINET: 184 mm × 146 mm × 305 mm A2i / A2i PROFINET: 250 mm × 146 mm × 305 mm	235 mm × 202 mm × 152 mm	94 mm × 104 mm × 86 mm
<b>User interface</b>	7" touch screen	Two-digit 7-segment display	7" touch screen	Three-digit 7-segment display
<b>Power consumption</b>	A1T: 515 W A2T: 825 W A3T: 1,140 W A4T: 1,450 W	A1i / A1i PROFINET: 400 W A2i / A2i PROFINET: 800 W	230 W (depending on the number and type of the connected lamp heads)	200 W
<b>Power specification</b>	15 – 100 % (increment 0.1 %)	15 – 100 % (increment 0.1 %)	5 – 100 % (increment 0.2 %)	5 – 100 % (increment 0.2 %)
<b>Irradiation time</b>	0.1 s to ∞	0.1 s to ∞	0.1 s to ∞	0.025 s to ∞
<b>Weight</b>	A1T: 5.7 kg A2T: 7.9 kg A3T: 10.1 kg A4T: 12.3 kg	A1i / A1i PROFINET: 5.0 kg A2i / A2i PROFINET: 7.3 kg	3.6 kg	440 g

**DELO-DIV VD450****DELO-DIV VD600****Dimensions**

ø 33 mm x 228 mm

ø 40 mm x 274 mm

**Media viscosity**

Aqueous to pasty

Aqueous to pasty

**Volume flow**

0.5 – 6.0 ml/min

1.4 – 16.0 ml/min

**Min. dispensing quantity**

0.004 ml

0.015 ml

**Dispensing accuracy**

± 1 %

± 1 %

**Material input**G 1/8"  
DIN/ISO 228G 1/4"  
DIN/ISO 228**Material output**

Luer-Lock (patented)

Luer-Lock (patented)

**Repeatability**

&gt; 99 %

&gt; 99 %

**Weight**

300 g

650 g



- DELO with engineering lab
- DELO office
- ▭ DELO covered countries

## Germany · Windach / Munich

China | Czechia | France | Italy | Japan | Korea  
Malaysia | Singapore | Thailand | USA



Discuss your project and your requirements with our experts:  
[equipment-experts@DELO.de](mailto:equipment-experts@DELO.de)