

DELO



DELOLUX 20 and DELOLUX 202

LED Area Lamps



DELOLUX 20 and DELOLUX 202 with DELO-UNIPRO Light control unit



DELOLUX 202 and DELOLUX 20

LED curing lamps for fast production

DELOLUX lamps are the leading technology when fast and adhesive-friendly curing is required. They are highly energy-efficient and have a significantly longer lifetime than comparable discharge lamps.

Another benefit is the fact that the wavelengths are adjusted to the DELO adhesives, allowing optimum curing. The possibility of individual switching of the LEDs, and their low energy consumption help make production processes highly cost-efficient.

With DELOLUX 20 and DELOLUX 202, DELO has developed innovative lamps that enable fast and even curing of laminar adhesive areas, while ensuring reliable processes. Bonding areas of any size can be irradiated by arraying multiple DELOLUX 20 or DELOLUX 202 lamp heads.

“Plug and produce”

Thanks to the compact design (the light area approximates the outer dimensions), the lamps are easy to integrate into production lines. The ergonomically shaped round plug allows fast installation of the lamp head.

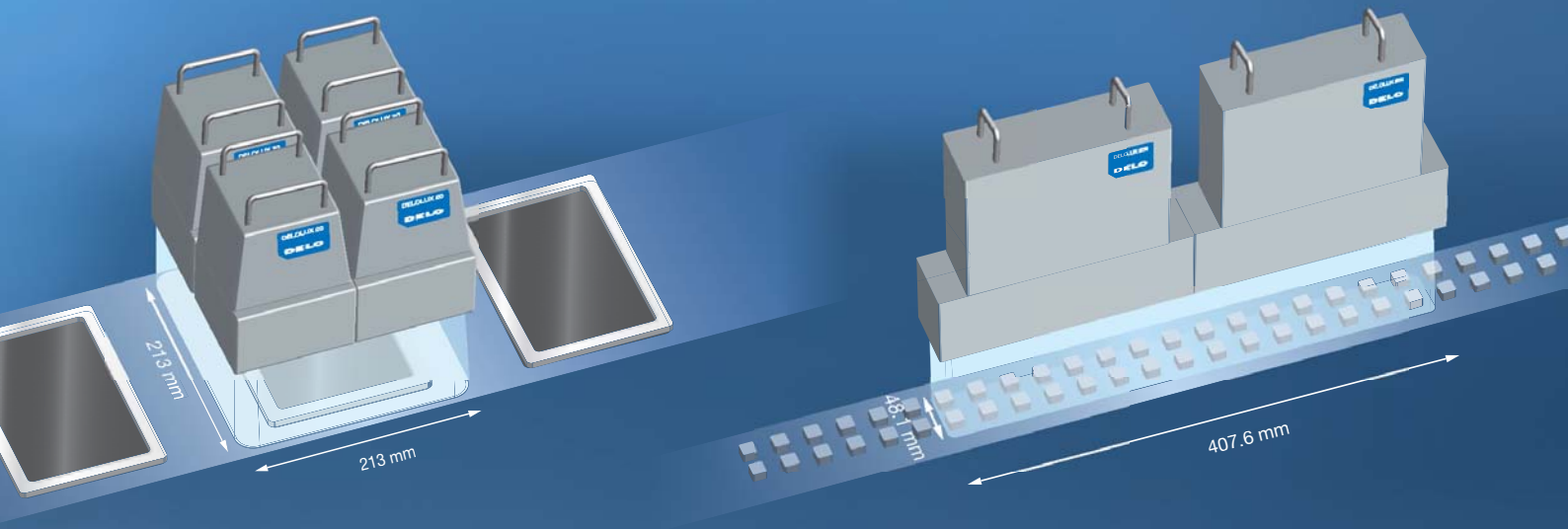
Low energy consumption and maintenance requirements optimize operating costs.



The DELOLUX 20 curing runs cool. This ensures reproducible results in our production. Therefore, our bonding process for large displays is significantly improved. Thanks to the energy-efficient operation of DELOLUX 20, we have already experienced savings on our energy expenses.

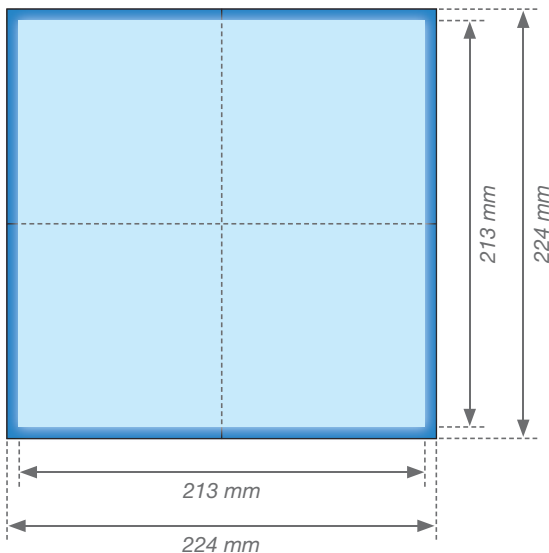
*Wolfgang Reichow,
Head of Production at ads-tec GmbH*



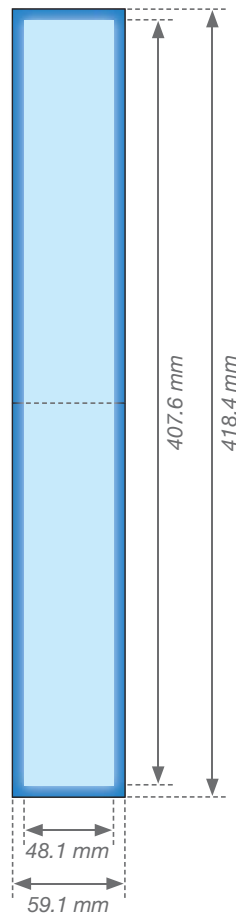


Integration into production lines

Array of several lamp heads



Array of four DELOLUX 20 lamp heads for large-area irradiation:
From a distance of 20 mm, an evenly irradiated area with a size of $213 \times 213 \text{ mm}^2$ is achieved.
Expandable in all directions.



Array of two DELOLUX 202 lamp heads for large-area irradiation:
From a distance of 20 mm, an evenly irradiated area with a size of $48.1 \times 407.6 \text{ mm}^2$ is achieved.
Expandable in all directions.



DELO supplies the most compact curing lamps on the market.



Even irradiation of
an industrial display
with six DELOLUX 20



Even curing



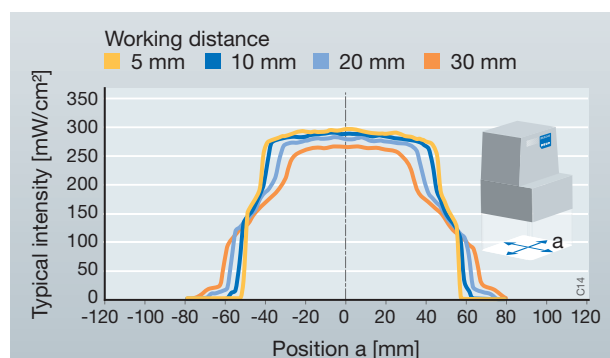
DELOLUX 20/DELOLUX 202:
Intensity, directly at chip:
365 nm: **63,000 mW/cm²**
400 nm: **92,600 mW/cm²**
460 nm: **54,000 mW/cm²**

DELOLUX 20 and DELOLUX 202 are area lamps that enable fast curing of laminar adhesive layers in seconds thanks to the even irradiation they provide. An innovative optical system enables DELOLUX 20 and DELOLUX 202

to distribute the emitted light evenly, especially at normal working distances of 5 to 30 mm. The curing lamps' wavelengths of 365, 400 or 460 nm are optimized for DELO's light-curing and UV-curing adhesives.

DELOLUX 20

Ideal for even irradiation of larger areas



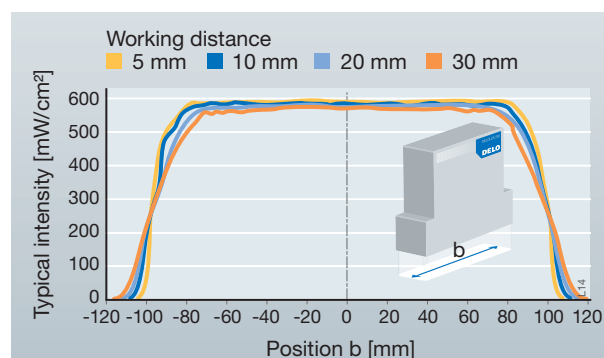
Light intensity distribution of DELOLUX 20/365 in dependence of the distance between lamp head and bonding area

Application areas:

- Glass bonding
- Large-area display bonding requiring even and low-tension curing
- Thick, laminar adhesive layers

DELOLUX 202

Ideal for even irradiation of long lines



Light intensity distribution of DELOLUX 202/400 in dependence of the distance between lamp head and bonding area

Application areas:

- Bonding of small components in short cycle times
- Bonding of microswitches
- Bonding of miniloudspeakers



Benefits overview

Properties	Your benefits
<ul style="list-style-type: none"> → Optimal curing of photoinitiated-curing DELO PHOTOBOND, DELO KATIOBOND and DELO DUALBOND adhesives → Evenly distributed intensity → Stable light power at a constantly high level and at variable distances → Air cooling system hermetically separated from the LED, therefore no contamination of the LEDs → Monitoring of the LED temperature and function → Non-intermittent irradiation possible → Light generation directly in the lamp head 	<ul style="list-style-type: none"> ✓ Reliable, complete adhesive curing ✓ High process reliability ✓ Fast curing in seconds, short cycle times
<ul style="list-style-type: none"> → Minimum heat development at the component (cold light source) 	<ul style="list-style-type: none"> ✓ Irradiation of sensitive materials possible
<ul style="list-style-type: none"> → 10 times higher energy efficiency compared to discharge lamps, therefore lower energy consumption → Lifetime of more than 20,000 hours can be achieved → Highly efficient air cooling even at elevated ambient temperatures → The use of irradiation-resistant materials prolongs the lifetime → No warm up 	<ul style="list-style-type: none"> ✓ Low operating costs ✓ Low costs for maintenance and spare parts
<ul style="list-style-type: none"> → Easy to install and compact lamp heads → Irradiation area expandable in x and y direction 	<ul style="list-style-type: none"> ✓ High flexibility of system integration
<ul style="list-style-type: none"> → No hazardous radiation in the UVB and UVC range 	<ul style="list-style-type: none"> ✓ High level of occupational health and safety

Curing lamps for various photoinitiated-curing adhesives:

	DELOLUX 20 DELOLUX 202		DELOLUX 20	Minimum irradiation time [s] ¹	Typical application
	365	400	460		
DELO PHOTOBOND				DELO Stand. 43	
4436	+	++	*	4	Multi-purpose adhesive
4494	+	++	–	5	Multi-purpose for glass, metal, plastic
4496	+	++	*	18	Sealing
4497	+	++	–	3	Multi-purpose adhesive
AD494	+	++	–	14	Multi-purpose adhesive
PB437	+	++	–	1	Multi-purpose for glass, metal, plastic
GB310	++	–	–	5	Glass showcases, glass furniture
DELO KATIOBOND				DELO Stand. 37 ²	
4552	+	+	++	12	Bonding, sealing
4578	+	+	++	12	Bonding, sealing
4594	+	+	++	14	Bonding, sealing
45952	+	+	++	20	Bonding, sealing
KB554	+	+	++	21	Bonding, sealing
GE680	++	–	–	4	Casting, coating
OB642	++	+	–	6	Bonding, sealing

++ Excellent adhesive – lamp combination
 + Suitable adhesive – lamp combination
 – Curing not possible
 * Might be beneficial in special applications

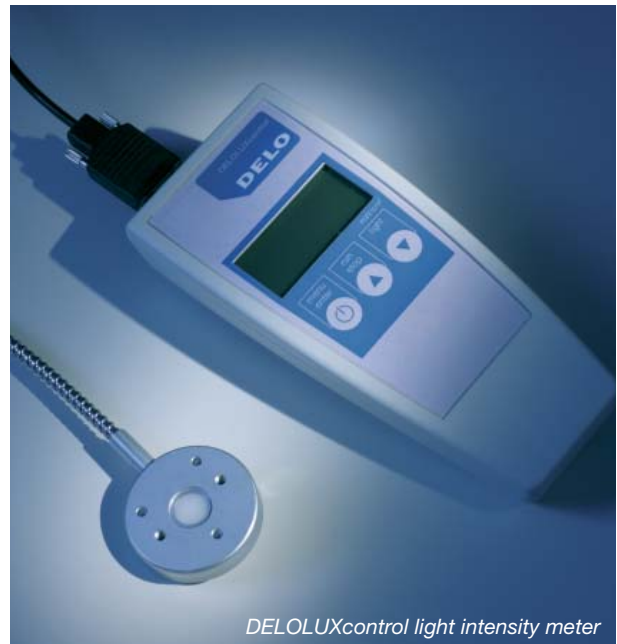
¹ At open adhesive drop; adhesive-specific adjustment of intensity and wavelength with ideal lamp; longer irradiation times might be beneficial in special applications
² Irradiation with 200 mW/cm²

System components	Article number
DELOLUX 20 LED head 365 without base unit	95 202 80
DELOLUX 20 LED head 400 without base unit	95 202 86
DELOLUX 20 LED head 460 without base unit	95 202 67
DELOLUX 202 LED head 365 without base unit	95 202 81
DELOLUX 202 LED head 400 without base unit	95 202 87
DELOLUX 202 LED head 460 without base unit	95 202 88
DELOLUX 20/202 base unit	95 202 65
Control	Article number
DELO-UNIPRO, control unit for DELOLUX 20 or DELOLUX 202	95 200 01
Connection line between DELOLUX 20, 202, 50, 80 and DELO-UNIPRO	95 200 59
DELO-UNIPRO Light, control unit for DELOLUX 20 or DELOLUX 202	95 200 51
Connection line between DELOLUX 20, 202, 50 and DELO-UNIPRO Light	95 200 53
Accessories	Article number
DELO-RACK, housing for DELOLUX 20 or DELOLUX 202 and DELO-UNIPRO Light	95 200 36
DELOLUXcontrol light intensity meter without detector head, for area lamps and light guide lamps	95 201 08
DELOLUXcontrol LED detector head, 9 mm	95 201 04
UV safety glasses	95 200 48

Optimized for increased process reliability



DELO-UNIPRO Light control unit



DELOLUXcontrol light intensity meter

Easy control: DELO-UNIPRO

In order to be able to meet customer-specific demands, the control concept of DELOLUX is modular. Up to four lamps can be independently controlled with the external DELO-UNIPRO control unit. Irradiation time and intensity can be individually set for each lamp.

In addition, the status of all monitored lamp functions is displayed on the DELO-UNIPRO control unit – or alternatively via PLC. The control unit is also available as the DELO-UNIPRO Light version which – as the name suggests – is a “light” version with just the core functions.

Parameters	DELO-UNIPRO	DELO-UNIPRO Light
Core functions (irradiation time, intensity)	✓	✓
Controllable DELOLUX 20 or DELOLUX 202	4	1
Status and error display	✓	–

Easy measurement: DELOLUXcontrol

Intensity measurements at regular intervals provide the customer with process reliability when operating DELOLUX lamps. Contaminations and slight distance changes, which might impair the intensity of the optical systems, are detected during checks with the light intensity meter.

DELOLUXcontrol optimally supports the users in their processes. The device can be equipped and operated with different detector heads.



All DELO products are developed and produced in Germany, ensuring the highest quality of design and manufacture.



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The technical data are for informational purposes only. Specific values can be found in the user manual. It is the user's responsibility to test the suitability of the device for the intended purpose by considering all specific requirements. If you need support in using the devices, please feel free to ask your contacts in our Engineering Department.

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04/16



Adhesives

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