

■ Features

- Easy magnification change (removal of optical fiber not required)

■ Applications

- Laser soldering
- Plastic welding
- Thermal processing



■ Outline

This is a focusing lens unit dedicated to irradiation unit for LD irradiation light source SPOLD®.
The focusing magnification can be changed easily by replacement of focusing lens unit.

■ General ratings

Parameter	Rating	Unit
Operating temperature *	+10 to +30	°C
Storage temperature *	-20 to +50	°C
Storage and operating humidity *	≤60	%
Place of use	Indoor at an altitude of ≤2000 m	—

* No condensation

■ Specifications

Parameter	A12803-30-F050	A12803-30-F100	A12803-30-F150	A12803-30-F200	Unit
Corresponding LD irradiation light source	L14140 series and L13920 series (when using A12803-30 series)				—
Working distance *1	Approx. 44	Approx. 96	Approx. 148	Approx. 198	mm
Laser transmittance	≤95				%
Dimensions (D × L) *2	φ30 × 8.5				mm
Weight	≤10				g

*1: Optical designing value: Distance from end of protective glass holder inside irradiation unit

*2: For tolerance, refer to dimensional outline.

Focusing lens unit A12803-30-Fxxx series

■ Combination table A12803-30-F50/F100

Corresponding irradiation unit			Focusing lens unit			
A12803 series			A12803-30-F050		A12803-30-F100	
Type No.	Focusing magnification	Working distance	Focusing magnification	Working distance	Focusing magnification	Working distance
A12803-30-10SA/DA	×1	44 mm	—	—	×2	96 mm
A12803-30-20SA/DA	×2	96 mm	×1	44 mm	—	—
A12803-30-40DA	×4	98 mm	×2	44 mm	—	—
A12803-30-80DA	×8	96 mm	×4	44 mm	—	—

* Light condensing spot diameter is calculated by core diameter of laser transmitting optical fiber × focusing magnification.

* Working distance: Distance from end of protective glass holder.

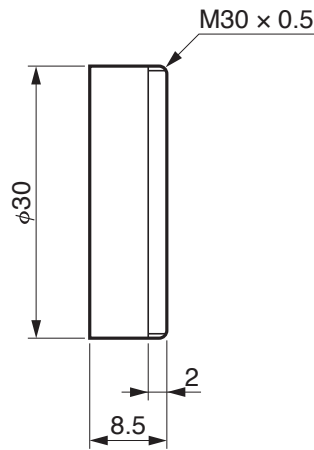
■ Combination table A12803-30-F150/F200

Corresponding irradiation unit			Focusing lens unit			
A12803 series			A12803-30-F150		A12803-30-F200	
Type No.	Focusing magnification	Working distance	Focusing magnification	Working distance	Focusing magnification	Working distance
A12803-30-10SA/DA	×1	44 mm	×3	148 mm	×4	198 mm
A12803-30-20SA/DA	×2	96 mm	×3	148 mm	×4	198 mm
A12803-30-40DA	×4	98 mm	×6	148 mm	×8	198 mm
A12803-30-80DA	×8	96 mm	—	—	—	—

* Light condensing spot diameter is calculated by core diameter of laser transmitting optical fiber × focusing magnification.

* Working distance: Distance from end of protective glass holder.

● Dimensional outline (Unit: mm)

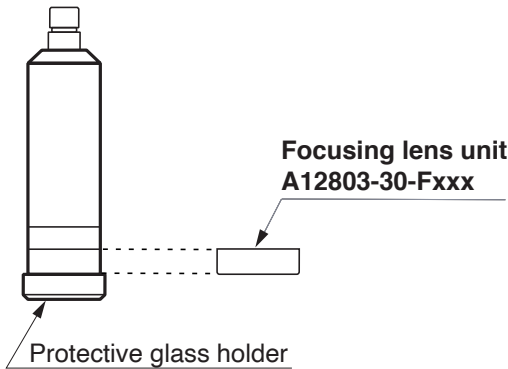


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* Unspecified tolerance shall be ±0.2 mm.

● Focusing lens unit installation image

Irradiation unit A12803-30 series



● Information described in this material current as of March 2021. Specifications are subject to change without notice.

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