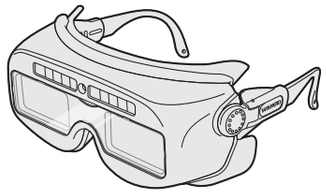
YTS-399

YAMAMOTO

LCD shutter protective glasses for laser welding

CE YL-750 YAG LCG instruction manual



- The content of the instruction manual has been fully ensured, but please contact us if there are any suspicious points, errors, or omissions.
- The contents of this manual may be changed without notice due to product improvement.
- This instruction manual is required to request repair of this product. Please keep it carefully.

The contents of the instruction manual, including the design and specifications of this product, may be changed without notice. Please visit our website for the latest information. (https://www.yamamoto-kogaku.co.jp/safety/)

General remarks

All persons staying in the danger zone of laser radiation must use an appropriate protector.
This product protects user from accidental exposure of laser radiation.
This product meets the basic safety and health requirements of PPE regulation (EU) 2016/425, and harmonized standard EN379:2003+A1:2009, EN207:2017.

Note：Please check the CE declaration form from each page of the corresponding product at the following URL

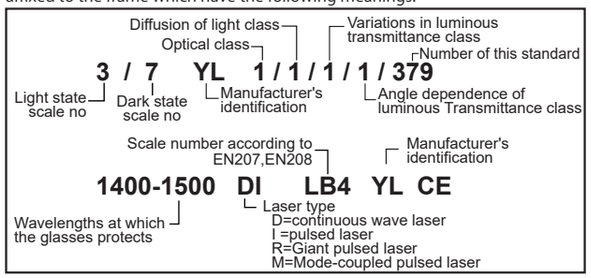
https://www.yamamoto-kogaku.co.jp/en/ce/

WARNING
- Please use laser protector suitable for the laser to be used. Using wrong way leads to serious accidents.
- Even when wearing laser protector, please do not look into directly the laser beam.
- There is a danger of unexpected laser irradiation due to the reflection, tilts and misalignments of installed optics and optical parts.
- When laser glasses are put on over prescription glasses, the shock of flying objects may affect prescription glasses and cause injury.
- Before use, confirm that there is no abnormality such as cracking, peeling of coating, melting due to laser irradiation, etc. in the frame, lens or sensor, and in such a case, stop using this product.

CAUTION
- Substances that may harm the health or hygiene of the product wearer or other people who come into contact with the product are not confirmed in this product.
- May cause allergic reactions to people sensitive to substances that may come into contact with the wearer's skin.

Meaning of markings

In order to be able to use the glasses as intended, certain markings have to be affixed to the frame which have the following meanings:



Certification body

The products of our company listed in this information brochure have been type-tested by

ECS GmbH
Huettfeldstrasse 50 73430 Aalen, Germany
Notified body 1883

and are subject to permanent quality controls.
Therefore, this product is allowed to be marked with CE .

Before using

Although this product has passed our quality standards, there is a risk that the product may be scratched, deformed, or loosened during transportation etc. Be sure to check in advance before using the glasses. The product is packaged and shipped after full charge, but it may fall below the required voltage due to natural discharge before it arrives. Be sure to irradiate the solar panel portion of the unit with natural light or fluorescent light for about 1 hour before use, please use it.

Please check the following before use and do not use it if it is not proper.
①Are there any breakages or cracks in the lens or frame?
②Are there looseness or looseness at the temple attachment part?
③Are there hair, a hat, etc. blocking the sensor?
④Is the light blocking operation performed normally?

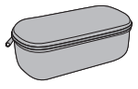
・Is the reaction speed unusually slow?
・Do you return to the normal state from the light blocking state?

Package contents

Body ・Liquid crystal glasses

Accessories

・Semi hard case



・Lens protection plate (spare)

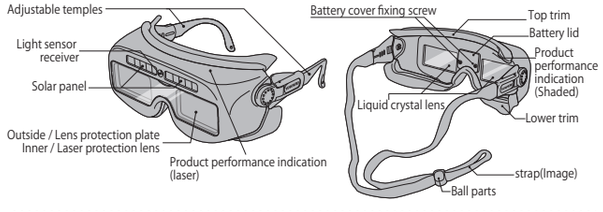
・Cleaner cloth

・Strap

※ It is attached to the body at the time of purchase.

・Instruction manual

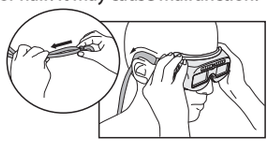
Name of each part



①At the time of purchase, the scratch protection film is stuck on the lens protection plate. Be sure to remove it.
②There is no need to operate the power supply as it automatically turns on / off the power.
③The sensor detects light and automatically switches the light shielding on and off.

How to wear glasses

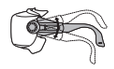
①Loosen the ball part of the strap and attach the glasses from the front of the face.
※ Please do not cover the solar panel and the light sensor with hat or hair. It may cause malfunction.



②Adjust so that there is no gap between your glasses and your face.

▶Temple length adjustment
Move in the direction of the arrow to adjust the length (both left and right).

▶Temple angle adjustment
Move in the direction of the arrow to adjust the angle (both left and right).



▶Adjust the strap
Move the ball parts of the strap to fix the glasses.

How to remove the lens protection plate (spare)

If you remove the lens protection plate, the laser protection lens may drop off and get damaged. Please be careful when handling.

▶How to attach the lens

①Take out the supplied lens protection plate (spare) (※ below, protection plate) and peel off the scratch protection film attached on both sides.
②Insert the left and right protrusions of the protective plate into the holes on the frame side.

③There are three protruding parts on the top and bottom of the protection plate. Press and fix near the protruding part. When using the included lens cleaner, fingerprints will not be attached to the lens.
※ Do not push the center of the protection plate strongly.

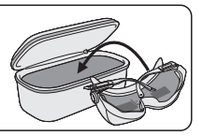
▶How to remove the lens

There is a crescent-shaped gap at the top center of the lens protection plate. Remove the lens from there.

Storing

i .After use, please remove dirt from the product.Please put it in a case as necessary and keep them in a place without dust.
ii .Keep in custody at the place that is free from sun light, high temperature,exposure to organic solvents.

【When not using this product】
As shown on the right, please store in the attached semi-hard case with the front part of glasses facing down so that light does not reach the light sensor. The power to the glasses turns off automatically, preventing unnecessary battery drain.



Cleaning

Always clean the product, especially the light sensor part.
i .When the shield is stained with dirt, dust, iron powder and oil,you must soak these lenses into water and remove such stains with finger tip and wipe them with soft cloth.
ii .The resin part of this product may be deformed or broken depending on the type of organic solvent, acid and alkali. Do not use these chemicals for cleaning.
●If these adhere, wash in the same way as (i) above.
iii .If disinfection is required, wipe the product with a soft cloth containing a disinfection alcohol. After wiping off the disinfection alcohol well, please use it.

Expiration date for use

In case of following situations, please change the product to new one without using it.
i .Bad condition such as scratches and cracks are found.
ii .After the product receives strong impacts even if it has normal appearance.
iii .The damages on the product from laser radiation might be found.
iv .After exposing against strong light and high temperature.The change of color and deformation of the product might be found.
v .Three years later, the user should replace the product even under normal use and conditions.

Field of application

This product protects user against scattered light and diffuse reflection of a laser beam . This product has following features:

Light state scale No.	# 3
Dark state scale No.	# 7

Note: When luminous transmittance is less than 20%, please increase lighting in the workplace. Warning lights and warning notices might be difficult to read. This filter is not suitable for long-term use.

This product has following features:

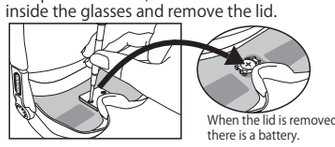
Optical class	1
Diffusion of light class	1
Variations in luminous Transmittance class	1
Angle dependence of luminous Transmittance class	1

Optical Density	7.0< (1020-1500nm)	
Laser type (EN207)	Wavelength range(nm)	Scale number(EN207)
D	1020-1400	LB6
IR	1020-1400	LB7
DI	1400-1500	LB4

NOTE: This product protects user against scattaered light and diffuse reflection of a laser beam and it gives the user the possibility to protect from the laser beam within a certain period of time (max. 5 sec resp. 50 pulse).

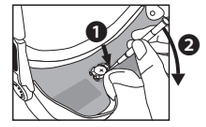
Battery replacement method

①Using a commercially available precision [+] Phillips screwdriver, loosen the two screws inside the glasses and remove the lid.



- Battery life
  Although it varies depending on the use situation, it will be about 6 months.
- Confirmation of replacement time
  If it takes about 20 seconds to clear the light shielding condition even after the welding work, it is a sign that the battery life is near. Please replace it with a new battery promptly.

②Insert a rod-like tool such as a precision screwdriver into 1 and move it to push out in the direction of the hook to remove the battery.



③Set the visible side (upper side) to [+]and insert a new battery (CR1220).

④Close the lid in the reverse order.

Main Specifications

Size	[Outline] W161 x H73 x D 142 (~ 149) mm, [Lens] 45 x 23 mm
Power supply	Solar cell ・ built-in battery / Automatic switch
Weight	about 115 g (except for straps)
Optical density	7< (1020nm～1500nm)
Degree of shading	Before shading: # 3 (light) ／ Luminous transmittance: about 14%
	When shaded: # 7 (dark) ／ Luminous transmittance: about 0.3%
Transmittance	UV light : less than 0.0001% Infrared: 0.0002% or less
Reaction time ※ 23 ℃ assumed	(Light to dark) about 0 0002 seconds, (Dark to light) 0 25 seconds to 0.45 seconds
Operating temperature	-10℃ ～ 60℃
Outer material	Frame : Polyamide ／ Temples : Polyamide
Applicable welding	Laser welding, SMAW (coated arc welding), Plasma arc welding
Conforming standard	EN379、EN207

Manufacturer
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