

Slit for Light Diffraction Grating

Cat.No. D20-1842-W0 (5pcs) and D20-1842-W1 (1pc)

Instruction Manual

Precautions



You should not directly look into the laser rays when conducting experiments with laser rays and this product. Laser rays may damage your eyes.



You should not use "Slit for Light Diffraction Grating" without shield sticker which protect your eyes from laser rays, when you use the laser pointer. You should put the shield sticker on the product in order to avoid the reflection of Laser rays into your eyes before starting use of this product.



Do not let students to conduct experiments without the presence of teacher or trainer.



Teacher or trainer must instruct students about the safe ways of conducting experiments with this product before conducting experiments

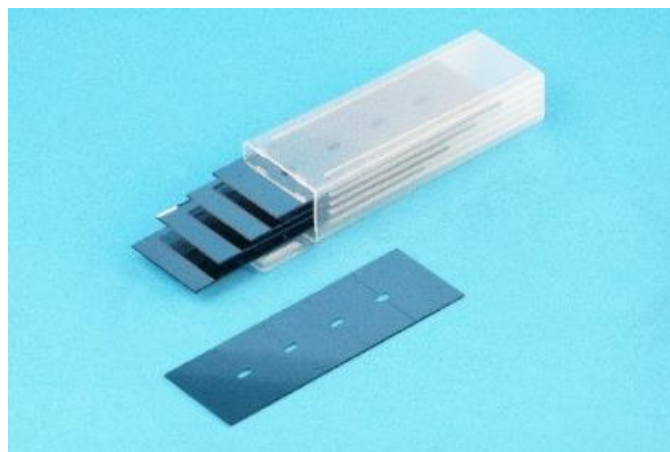


Be careful when handling the slit because it is made from glass. In the case that the slit is broken, do not touch bits of glass by your hands. Especially, do not let students to touch them.

Thank you very much for purchasing this product. You should read and understand the precaution in advance before you start conducting experiments. Please store this instruction manual after reading somewhere close, so that you can refer to it easily if needed.

Introduction

"Slit for Light Diffraction Grating" is the highest quality grade slit that is suitable for Young's experiment. The single slit and double slit and diffraction gratings are on one plate of glass.



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Specification

- Size: 76 x 26mm, Amount: 5 pcs (D20-1842-W0) or 1pc (D20-1842-W1)
- Slit: Single, Double slit (6 kinds), Diffraction Grating (2 kinds) (See Table 1).
- Shield Sticker: 5 sheets D20-1842-W0) or 1 sheet (D20-1842-W1)
- Four small square holes in the middle of the glass are for easier navigation of laser beam into the slit before starting observation.

Table 1. Number of Lines, width and gap of Slit for Light Diffraction Grating.

	A	B	C	D	E	F	G	H
Number of lines	2	2	2	30	10	1	1	1
Width (mm)	0.02	0.02	0.02	0.01	0.02	0.01	0.02	0.05
Gap (mm)	0.04*	0.07*	0.22*	0.02*	0.06*	-	-	

*The gap is measured from the middle of one slit to the middle of another slit.

Preparation for Experiment

You should attach the enclosed shield sticker on "Slit for Light Diffraction Grating" for protection of eyes to avoid damaging them by reflected laser ray. The slit and the enclosed sticker in the product comes separately like on following Fig. 1 and Fig. 2. As the surface condition of the slit is same as a mirror, it can be dangerous to use without the shield sticker.

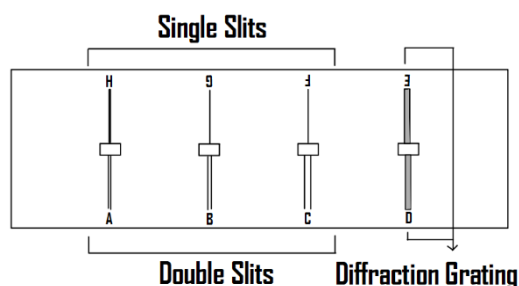


Fig. 1 Slit for Light Diffraction Grating

In addition, the surface of the slit can be easily removed or damaged by scratching, because of its sensitive thin coating. Therefore, the shield sticker is needed on the surface of coating side as a protection.



Fig. 2 Shield Sticker Sheet

Use as a reference process to stick the shield stickers on the Slit for Light Diffraction Grating (Fig. 3). Advice, you should start sticking the shield sticker on the face side from the edge end of the slit.

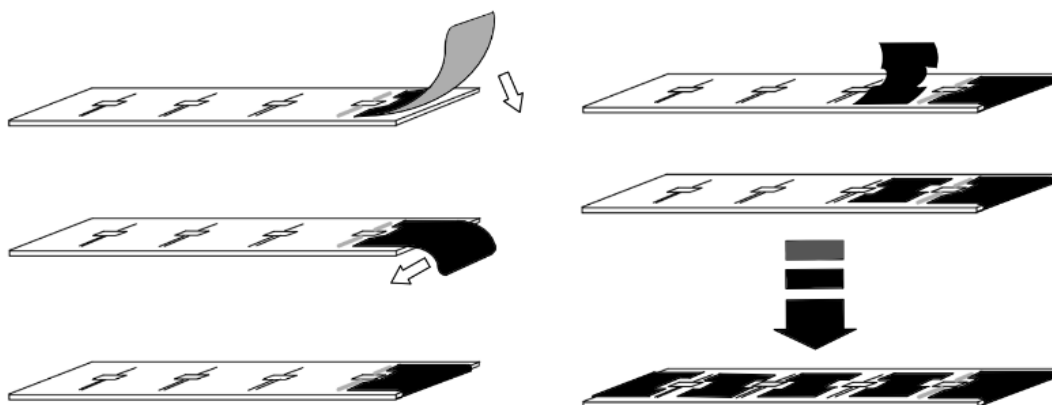


Fig. 3 Sticking steps of Shield Sticker on the slit glass