



LED/Li-ion Laryngoscopes

Whiteness, brightness, durability

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LARYNGOSCOPES

Riester laryngoscopes are reliable quality products. They are excellently finished and guarantee extreme durability. All handles and blades are made of high quality materials and are subjected to strict quality controls. The **Riester** program comprises all conventional laryngoscope models with excellent LED and xenon illumination and fiber optics or with tried and tested 2.7 V vacuum illumination.

- Exceptionally high light intensity thanks to XL xenon and LED-illumination technology and the extra-strong fiber bundles of the F.O. blade.
- Macintosh and Miller blades with innovative blade design for optimum visibility of the epiglottis and vocal chords, simple insertion of the endotracheal tube.
- Large choice of power sources: manoeuvrable and sturdy battery handles and practical charging bases.
- Wide selection of laryngoscope sets for paediatrics and adults with particularly convincing cost effectiveness. All handles and blades are supplied singly and each can be individually combined within the fiber optics or standard model ranges.



LITHIUM-ION RECHARGEABLE BATTERY THE POWER PLUS.

Memory effect and self-discharge are no match: the light-weight lithiumion battery used in the handles has an unsurpassed lifetime – with higher loading capacity and sustained high-power performance, even after well over 1000 charge cycles.

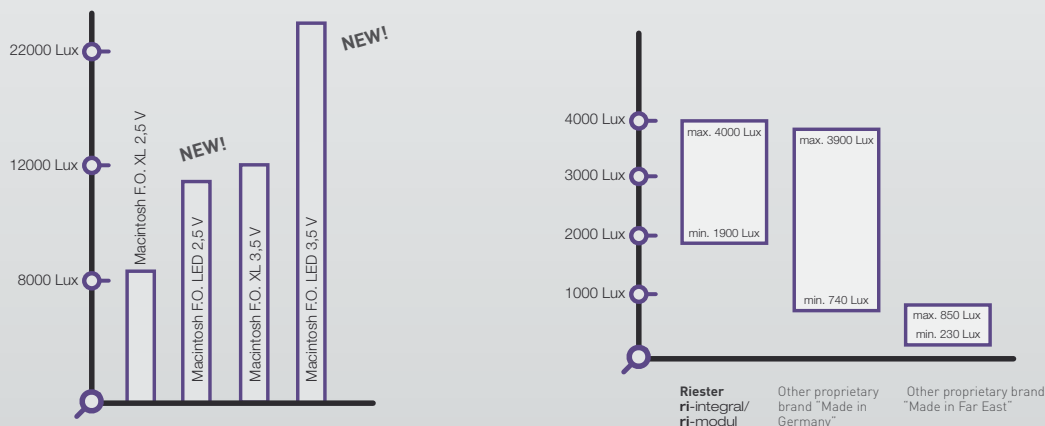


LED TECHNOLOGY PERFORMANCE FOR LIFE.

Nearly unlimited lifetime up to 100,000 hrs with the highest luminosity: these advantages make the LED technology so unique. Moreover, the lamp inside the handle never gets hot, provides true-color, even illumination of the area under examination and is practically guaranteed never to fail, in contrast to conventional halogen or xenon lamps.

Test results* prove the excellent light intensity and durability of Riester F.O. blades and their suitability for longterm continuous use.

* Test results after 1200 autoclaving cycles (134° C for 5 minutes with the Melag Vacuklav 31). Measurements were performed using a 2.5 V XL Xenon lamp at constant light output at a distance of 40 mm from the distal end of the blade (size 3).



F.O. LARYNGOSCOPES

Riester F.O. laryngoscopes pave the way for the future. XL + LED illumination technology, highquality fiber optics and special blade design ensure optimum visibility and simple intubation.

- With XL or LED 3.5 V or 2.5 V xenon lamp for bright, white light.
- Lamp integrated into the handle with metal contacts simplifies autoclaving of the blades.
- Optimum light transmission thanks to fiber optics, with extrastrong fiber bundles.
- Macintosh F.O. and Miller F.O. blades with integrated light conductor and optional Macintosh F.O. blade with removable light conductor.
- Long service life with autoclaving cycles of 134° C for 5 minutes.*
- Stainless steel blades with refined surface finish, easy-to-clean blade surface.
- Special blade designs offer excellent visibility of the vocal chords and epiglottis and simplify insertion of the endotracheal tube.
- Choice of charging handles type AA or type C for charging in the charging base **ri-charger**® L or non-rechargeable battery handles.
- **All blades are compatible with handles complying with ISO 7376.**
- Hard and soft cases are available for individual combinations of up to five blades and one handle.

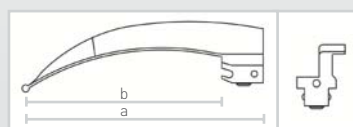
* Testing of the suitability for autoclaving was performed with the Melag Vacuklav 31.

ri-integral

- With integrated F.O. light conductor. Particularly easy to clean, as there are no external conductors and openings to become contaminated!
- Outstanding light intensity through XL + LED xenon illumination and strong fiber bundles.
- Blade design for simple intubation.

ri-integral MACINTOSH F.O. BLADE

- The clear design of the Macintosh F.O. blade with no edges or corners simplifies cleaning and autoclaving.
- Exceptionally high light intensity with XL + LED illumination.
- Extra-strong fiber bundles with a cross-section of 17.3 mm ensure the best possible light intensity and durability.
- Laser welded, corrosion resistant

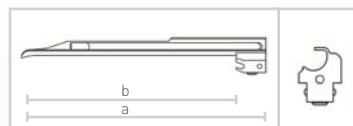


End view M 1:4 MAC 3

	Blade length a	Blade length b	Width at the distal end	Order numbers
MAC 0	81 mm	58 mm	9 mm	12230
MAC 1	95 mm	72 mm	9 mm	12231
MAC 2	116 mm	93 mm	13 mm	12232
MAC 3	135 mm	114 mm	14.5 mm	12233
MAC 4	155 mm	132 mm	14.5 mm	12234
MAC 5	178 mm	155 mm	14.5 mm	12235

ri-integral MILLER F.O. BLADE

- The flat design of the F.O. blade improves visibility considerably and simplifies intubation.
- Atraumatic blade design.
- Blade size 00 for neonates.
- Laser welded, corrosion resistant



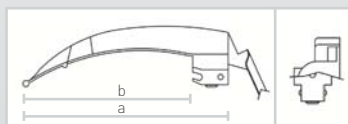
End view M 1:4 MIL 3



	Blade length a	Blade length b	Width at the distal end	Order numbers
MIL 00	76 mm	52 mm	9 mm	12240
MIL 0	80 mm	56 mm	9 mm	12241
MIL 1	103 mm	80 mm	10.6 mm	12242
MIL 2	154 mm	130 mm	12.5 mm	12243
MIL 3	193 mm	169 mm	12.5 mm	12244
MIL 4	211 mm	188 mm	14.5 mm	12245

ri-integral FLEX MACINTOSH F.O. BLADE

- Flexible blade with integrated F.O. light conductor.
- With bendable distal end.
- Outstanding light intensity with XL + LED illumination. Improved light transmission through extra-strong fiber bundles.
- New blade design for simple intubation: good visibility of the inlet of the larynx and vocal chords, reduced pressure in the pharyngeal area, minimised risk of injury.
- Available either in sizes 3 or 4.

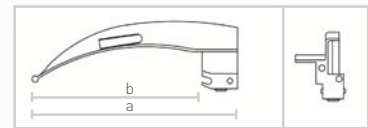


End view M 1:4 MAC 3

	Blade length a	Blade length b	Width at the distal end	Order numbers
MAC 3	132 mm	110 mm	14.5 mm	12250
MAC 4	154 mm	133 mm	14.5 mm	12251

ri-modul Macintosh F.O. blade

- Macintosh F.O. blade with removable light conductor, simple to remove and refit without tools.
- Reasonably priced alternative thanks to modular construction.
- Unusually high light intensity with XL + LED illumination and excellent light transmission through strong fiber bundles.
- Optimum blade design for easy intubation and improved visibility.



End view M 1:4 MAC 3



	Blade length a	Blade length b	Width at the distal end	Order numbers
MAC 0	81 mm	58 mm	9 mm	12260
MAC 1	95 mm	72 mm	9 mm	12261
MAC 2	116 mm	93 mm	13 mm	12262
MAC 3	133 mm	110 mm	14.5 mm	12263
MAC 4	155 mm	130 mm	15.5 mm	12264
MAC 5	170 mm	150 mm	15.5 mm	12272

ACCESSORIES

Light conductor
for **ri-modul** Macintosh
F.O. blades

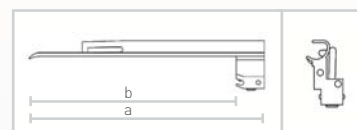
- Secure fitting and removal with ball mechanism.



	Order numbers
MAC 0	12265
MAC 1	12266
MAC 2	12267
MAC 3	12268
MAC 4	12269
MAC 5	12273

ri-modul Miller F.O. blade

- Miller F.O. blade with removable light conductor, simple to remove and refit without tools.
- Reasonably priced alternative thanks to modular construction.
- Unusually high light intensity with XL + LED illumination and excellent light transmission through strong fiber bundles.
- Blade size 00 for neonates.



End view M 1:4 MIL 3

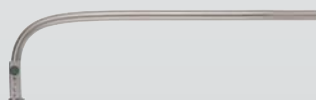


	Blade length a	Blade length b	Width at the distal end	Order numbers
MIL 00	67 mm	44 mm	10 mm	12274
MIL 0	78 mm	54 mm	10 mm	12275
MIL 1	101 mm	79 mm	10 mm	12276
MIL 2	155 mm	131 mm	13 mm	12277
MIL 3	195 mm	172 mm	13 mm	12278
MIL 4	205 mm	182 mm	17 mm	12279

ACCESSORIES

Light conductor
for ri-modul Miller
F.O. blades

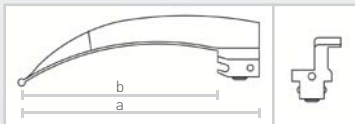
- Secure fitting and removal with ball mechanism.



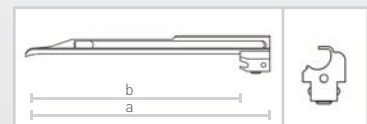
	Order numbers
MIL 00	12280
MIL 0	12281
MIL 1	12282
MIL 2	12283
MIL 3	12284
MIL 4	12285

ri-dispo Macintosh/Miller disposable laryngoscopes

- Prevention of cross contamination
- Made of high quality Makrolon® material
- High illumination, especially in combination with LED
- Pack of 20
- No sterilisation costs
- Compatible with F.O. handles (green standard)
- Metal ball lock mechanism
- Available as Macintosh and Miller



End view M 1:4 MAC 3



End view M 1:4 MIL 3

	Blade length a	Blade length b	Width at the distal end	Order numbers
MAC 1	90 mm	66 mm	11 mm	12290
MAC 2	116 mm	91 mm	12 mm	12291
MAC 3	134 mm	109 mm	16 mm	12292
MAC 4	153 mm	132 mm	16 mm	12293

	Blade length a	Blade length b	Width at the distal end	Order numbers
MIL 0	81 mm	56 mm	11 mm	12294
MIL 1	105 mm	80 mm	11 mm	12295
MIL 2	156 mm	131 mm	14 mm	12296
MIL 3	196 mm	171 mm	14 mm	12297
MIL 4	210 mm	188 mm	14 mm	12298

BLADES FOR ONE-TIME USE

ri-standard

- With reliable 2.7 V vacuum light source for good illumination of the examination area.
- Quick-to-remove lamp at the front of the blade.
- Can be autoclaved at 134° C for 5 minutes.*
- Stainless steel blades with easy-to-clean blade surface.
- Innovative blade design for simple intubation and good visibility.
- Either for chargeable handles or battery handles type AA

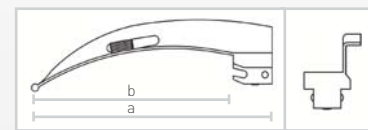
or type C for charging in the **ri-charger**® charging base or non-rechargeable.

- All blades are compatible with handles complying with ISO 7376.
- Hard and soft cases are available for individual combinations of up to twelve blades and one handle.

* Testing of the suitability for autoclaving was performed with the Melag Vacuklav 31.

ri-standard MACINTOSH BLADE

- The rounded edges of the Macintosh blade reduce the risk of injury.

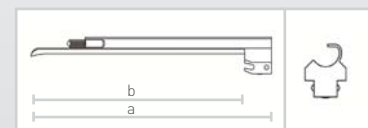


End view M 1:4 MAC 3

	Blade length a	Blade length b	Width at the distal end	Order numbers
MAC 0	80 mm	56 mm	10.4 mm	12210
MAC 1	90 mm	69 mm	10.4 mm	12211
MAC 2	102 mm	90 mm	11.3 mm	12212
MAC 3	130 mm	108 mm	13.7 mm	12213
MAC 4	155 mm	132 mm	13.7 mm	12214
MAC 5	175 mm	152 mm	13.7 mm	12215

ri-standard MILLER BLADE

- The flat design of the Miller blade provides good visibility of the epiglottis and vocal chords.
- Blade size 00 for neonates.



End view M 1:4 MIL 3

	Blade length a	Blade length b	Width at the distal end	Order numbers
MIL 00	65 mm	42 mm	11.3 mm	12220
MIL 0	77 mm	54 mm	11.3 mm	12221
MIL 1	100 mm	79 mm	11.3 mm	12222
MIL 2	152 mm	130 mm	14 mm	12223
MIL 3	195 mm	172 mm	14 mm	12224
MIL 4	205 mm	183 mm	17.4 mm	12225

POWER SOURCES

A large number of high quality and durable power sources are available for **Riester** quality laryngoscopes. From sturdy handles to reliable charging bases.

HANDLES

The sturdy handles are the basis of every reliable examination. Well thought-out ergonomics ensures comfortable handling.

- Solid handles made of chromium plated metal.
- Fluted handle surface for hygienic usage and a secure grip in the hand.
- Practically wear-free, standard holding fixture for the blade.
- Solid metal contact for reliable activation of illumination.
- Simple change of batteries at the base of the handle.
- Choice of battery handles available for charging in the **ri-charger® L** charging base or non-rechargeable handles in the sizes type AA or type C, respectively.
- All **Riester** laryngoscope handles are standardized according to ISO 7376.



Durable metal contact for activating the illumination.



Battery handles type C/AA for F.O. Laryngoscopes and ri-dispo rechargeable

- For **ri-accu®/ri-accu® L** rechargeable batteries.
- Simple recharging in **ri-charger®/ri-charger® L** charging base.
- Handle diameter: 28 mm and 19 mm.
- Handles for F.O. laryngoscopes including lamp.
- **ri-accu®/ri-accu® L** not included.

Battery handle type C XL 2.5 V	12300
Battery handle type C XL 3.5 V	12301
Battery handle type AA XL 2.5 V	12302
Battery handle type AA XL 3.5 V	12318
Battery handle type C LED 3.5 V	12314
Battery handle type AA LED 3.5 V	12316



Battery handles type C/AA for F.O. laryngoscope and ri-dispo non-rechargeable

- For two batteries type C/AA.
- Handle diameter: 32, 28 and 19 mm.
- Closed battery cover prevents liquids penetrating inside the battery compartment.
- Simple conversion to a charging handle by means of the open charging cover.
- Handles for F.O. laryngoscopes are supplied including the lamp.
- Without batteries.

Battery handles type C XL 2.5 V	12305
Battery handles type C LED 2.5 V	12311
Battery handles type AA XL 2.5 V	12306
Battery handles type AA LED 2.5 V	12312
Battery handles type AA (short) XL 2.5 V	12309
Battery handles type AA (short) LED 2.5 V	12317

The battery compartment is protected from liquids thanks to the closed battery cover.

Battery handles type C/AA for standard laryngoscopes rechargeable

- For two batteries type C/AA or a **ri-accu**[®] rechargeable NiMH battery..
- Simple charging in the **ri-charger**[®] charging base.
- Handle diameter: 28 and 19 mm.
- Without rechargeable battery NiMH **ri-accu**[®]

Battery handles type C	12303
Battery handles type AA	12304



Battery handles type C/AA for standard laryngoscope non-rechargeable

- For two batteries type C/AA.
- Handle diameter: 32, 28 and 19 mm.
- Closed battery cover prevents liquids penetrating inside the battery compartment.
- Simple conversion to a charging handle by means of the open charging cover.
- Without batteries.

Battery handles type C	12307
Battery handles type AA	12308
Battery handles type AA (short)	12310



The battery compartment is protected from liquids thanks to the closed battery cover.

Plug in handles Typ C for F.O. laryngoscope + ri-dispo rechargeable

- For **ri-accu**[®] L rechargeable battery.
- Easy to charge by plugging it in.
- Handle diameter: 28 mm.
- **ri-accu**[®] L rechargeable Li-Ion battery, not included.

Plug in handle Type C XL 3.5V/230V for F.O. laryngoscope	12330
Plug in handle Type C XL 3.5V/120V for F.O. laryngoscope	12331
Plug in handle Type C LED 3.5V/230V for F.O. laryngoscope	12332
Plug in handle Type C LED 3.5V/120V for F.O. laryngoscope	12333



ACCESSORIES

Charging cover type C/AA, open

- For simple conversion to a rechargeable battery handle.
- With screw thread.



Type C	12270
Type AA	12271



Type AA

By means of the open charging cover and the reduction insert, the handle can be charged in the **ri-charger®**/**ri-charger®** L charging base.



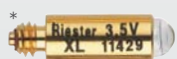
Type C

If the handle is equipped with the open charging cover, it can be recharged in conjunction with **ri-accu®**/**ri-accu®** L in the **ri-charger®**/**ri-charger®** L charging base.



Alkaline battery 1.5 V, type AA, Pack of 4	10685
Alkaline battery 1.5 V, type C, 2 pcs.	10686
ri-accu® L rechargeable Li-Ionen battery type AA 3.5 V	10690
ri-accu® rechargeable NIMH battery type AA 2.5V	10680
ri-accu® L rechargeable Li-Ionen battery type C 3.5 V	10691
ri-accu® rechargeable NIMH battery type C 2.5V	10681
ri-accu® L rechargeable Li-Ionen battery (plug in handle) 3.5 V	10692

LAMPS



XL 2.5 V xenon lamp for F.O. laryngoscopes XL 2.5 V Pack of 6	11428
XL 3.5 V xenon lamp for F.O. laryngoscopes XL 3.5 V Pack of 6	11429
LED 2.5 V for F.O. laryngoscopes LED 2.5 V 1 pcs.	12320
LED 3.5 V for F.O. laryngoscopes LED 3.5 V 1 pcs.	12321
2.7 V vacuum lamp, small for standard laryngoscopes ri-standard Miller No. 00 to 1 Pack of 6	11380
2.7 V vacuum lamp, large for standard laryngoscopes ri-standard Miller No. 2 to 4, Macintosh No. 0 to 5 Pack of 6	11381

* All lamps are shown in the original size.

CHARGING BASES

The **ri-charger® L/ri-charger®** with impulse charging technology prolongs the service life of the **ri-accu® L/ri-accu®** rechargeable battery. Battery handles type AA can be charged with the reduction insert. After each use, instruments are replaced on the charging base so that they remain operational at all times. If different voltages or country-specific plugs are needed with the standard models, we request you to give us exact details with your enquiries and orders.

- Simultaneous charging of 3.5 V handles type C and AA possible.
- Can be used as desk or wall model.
- With practical storage compartment for two replacement lamps and ear specula.
- **Status indicator of charging process displayed on the device:**
Yellow control lamp: charging in process.
Green control lamp: charging finished.



ri-charger® complete with wall holder • for all rechargeable handles 2.5 V with NiMH accus	10700	230 V
	10701	120 V
ri-charger® L complete with wall holder • for all rechargeable handles 3.5 V with Li-Ion accus	10705	230 V
	10706	120 V

Accessories



Wall mounting with screws and plugs	10710
Reduction insert for handles AA	10711
Cover for ear specula compartment	10712

CASES

Laryngoscope pouch <ul style="list-style-type: none"> • Zipper pouch für individual blade and handle combinations • Individual equipping with up to five blades and one handle • Blades and handle not included • Size 24 x 20 cm 	11389	black
Hard protective carrying case <ul style="list-style-type: none"> • Hard protective carrying case für individual blade and handle combinations • individual equipping with up to twelve blades and one handle • Blades and handle not included • Size approx. 40 x 32 cm 	11393	black

SETS

Riester offers a large selection of laryngoscope sets at attractive prices. The sets are equipped with various handles and can be optionally ordered in combination with the **ri-charger® L/ri-charger®** charging base.



- F.O. laryngoscope sets are equipped with LED or XL xenon lamps 3.5 V or 2.5 V, standard sets with 2.7 V vacuum lamps.
- The charging handles are charged in the **ri-charger® L/ri-charger®** charging device and are equipped with a **ri-accu® L/ri-accu®** rechargeable battery. The non-rechargeable battery handles have a closed battery compartment and are supplied without batteries.
- Supplied in a hard protective case with safety catches.
- **Storage possibilities for individual combinations of blades and one handles, see page 13.**

F.O. LARYNGOSCOPES



ri-integral Macintosh F.O.
With blades No. 2, 3 and 4.











ri-integral Macintosh F.O. baby
With blades No. 0, 1 and 2.



ri-integral Miller F.O.
With blades No. 2, 3 and 4.



ri-integral Miller F.O. baby
With blades No. 0, 1 and 2.

Battery handle type C, non-rechargeable 	8040 XL 2.5 V 8041 LED 2.5 V	8060 XL 2.5 V 8061 LED 2.5 V	
Battery handle type AA, non-rechargeable 		8050 XL 2.5 V 8053 LED 2.5 V	8070 XL 2,5 V 8073 LED 2,5 V
Battery handle type C, rechargeable ri-accu® L + ri-charger® L   	8120 XL 3.5 V/230 V 8121 XL 3.5 V/120 V 8122 LED 3.5 V/230 V 8123 LED 3.5 V/120 V	8125 XL 3.5 V/230 V 8126 XL 3.5 V/120 V 8127 LED 3.5 V/230 V 8128 LED 3.5 V/120 V	
Battery handle type AA, rechargeable ri-accu® L + ri-charger® L   	8130 XL 3.5 V/230 V 8131 XL 3.5 V/120 V 8132 LED 3.5 V/230 V 8133 LED 3.5 V/120 V		8135 XL 3,5 V/230 V 8136 XL 3,5 V/120 V 8137 LED 3,5 V/230 V 8138 LED 3,5 V/120 V



ri-modul Macintosh F.O.
With blades No. 2, 3 and 4.







ri-modul Macintosh F.O. baby
With blades No. 0, 1 and 2.



ri-modul Miller F.O.
With blades No. 2, 3 and 4.



ri-modul Miller F.O. baby
With blades No. 0, 1 and 2.

Battery handle type C, non-rechargeable 	8080 XL 2.5 V 8081 LED 2.5 V		8100 XL 2.5 V 8101 LED 2.5 V	
		8090 XL 2.5 V 8093 LED 2.5 V		8110 XL 2.5 V 8102 LED 2.5 V
Battery handle type AA, non-rechargeable 				
Battery handle type C, rechargeable + ri-accu® L + ri-charger® L 	8140 XL 3.5 V/230 V 8141 XL 3.5 V/120 V 8142 LED 3.5 V/230 V 8143 LED 3.5 V/120 V		8145 XL 3.5 V/230 V 8146 XL 3.5 V/120 V 8147 LED 3.5 V/230 V 8148 LED 3.5 V/120 V	
Battery handle type AA, rechargeable + ri-accu® L + ri-charger® L 		8150 XL 3.5 V/230 V 8151 XL 3.5 V/120 V 8152 LED 3.5 V/230 V 8153 LED 3.5 V/120 V		8155 XL 3.5 V/230 V 8156 XL 3.5 V/120 V 8157 LED 3.5 V/230 V 8158 LED 3.5 V/120 V

STANDARD LARYNGOSCOPES



ri-standard Macintosh
With blades No. 2, 3 and 4.



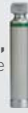

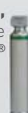
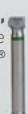
ri-standard Macintosh baby
With blades No. 0, 1 and 2.



ri-standard Miller
With blades No. 2, 3 and 4.



ri-standard Miller baby
With blades No. 0, 1 and 2.

Battery handle type C, non-rechargeable 	7040 2.7 V		7060 2.7 V	
Battery handle type AA, non-rechargeable 		7050 2.7 V		7070 2.7 V
Battery handle type C, rechargeable + ri-accu® + ri-charger® 	7041 2.7 V/230 V 7042 2.7 V/120 V		7061 2.7 V/230 V 7062 2.7 V/120 V	
Battery handle type AA, rechargeable + ri-accu® + ri-charger® 		7051 2.7 V/230 V 7052 2.7 V/120 V		7071 2.7 V/230 V 7072 2.7 V/120 V



MERCOFRAMES OPTICAL CORP

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