

BA



MSR 400, MSR 575/2



MSR 700(/2)



MSR 1200(/2)

**Features**

High-efficiency cold-strike metal halide lamps designed for optimum light collection. They combine the high luminous efficacy, compact arc (6-10 mm) and excellent colour characteristics required for a variety of spotlighting and projection applications. MSR lamps can be operated on an electronic power supply as well as on a magnetic ballast-ignitor combination. The run-up time is two minutes. Their restrike time is 5-10 minutes, depending on cooling conditions. The lamps are dimmable with the feature of stable colour temperature.

In view of their high internal working pressure, these lamps must only be operated in closed luminaires. They radiate a considerable amount of ultraviolet; the luminaire lenses must block this, and no radiation must be spilled through ventilation slots.

Burning position: universal.

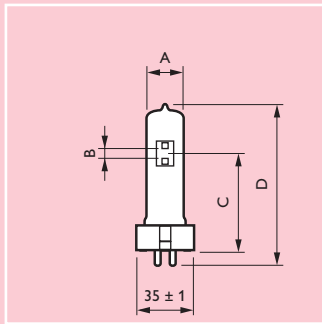
**Applications**

- Theatre stages.
- Discos.
- Entertainment.

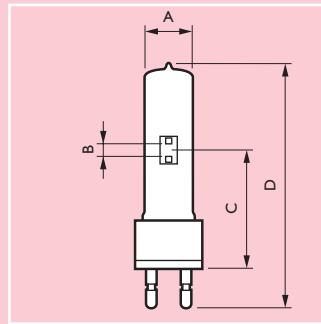


| Type       | Lamp wattage | Cap/ base | Lumen output | Efficacy source | Chromaticity coordinate |      | Tc   | Burning position | Average lamp life | Replacement before hours | Minimum ignition supply voltage | Lamp current | Colour rendering index | Ordering number |
|------------|--------------|-----------|--------------|-----------------|-------------------------|------|------|------------------|-------------------|--------------------------|---------------------------------|--------------|------------------------|-----------------|
|            | W            |           | lm           | lm/W            | x                       | y    | K    |                  | h                 | h                        | V                               | A            | R <sub>a</sub>         |                 |
| MSR 400    | 400          | GX9.5     | 32000        | 80              | .325                    | .320 | 5900 | ANY              | 1000              | 1200                     | 207                             | 6.90         | 92                     | 9280 779 05100  |
| MSR 575/2  | 575          | GX9.5     | 49000        | 85              | .302                    | .320 | 7200 | ANY              | 1000              | 1200                     | 207                             | 6.95         | 80                     | 9281 716 05100  |
| MSR 700    | 700          | G22       | 55000        | 80              | .325                    | .320 | 5900 | ANY              | 1000              | 1200                     | 207                             | 12.00        | 80                     | 9280 780 05100  |
| MSR 700/2  | 700          | G22       | 55000        | 78              | .302                    | .320 | 7200 | ANY              | 1000              | 1200                     | 207                             | 11.00        | 80                     | 9281 715 05100  |
| MSR 1200   | 1200         | G22/30x53 | 110000       | 91              | .325                    | .320 | 5900 | ANY              | 800               | 1000                     | 207                             | 13.80        | 95                     | 9280 781 05100  |
| MSR 1200/2 | 1200         | G22/30x53 | 110000       | 91              | .302                    | .320 | 7200 | ANY              | 800               | 1000                     | 207                             | 13.80        | 85                     | 9281 718 05100  |

Nominal values measured in horizontal burning position in an integrating sphere on a magnetic ballast.



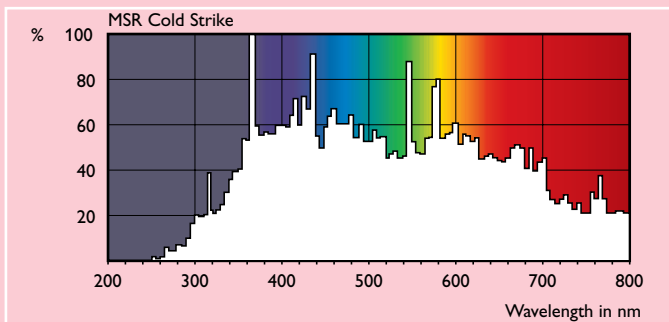
Dimensions in mm



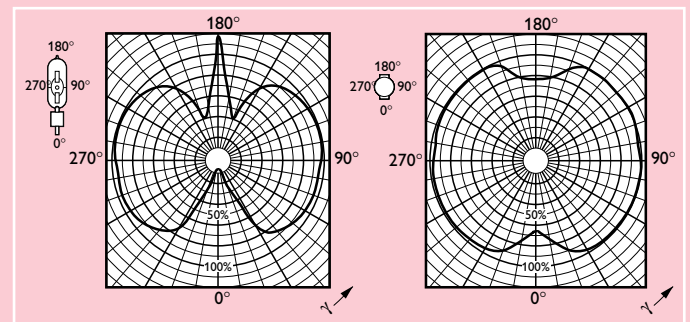
Maximum permissible temperatures (degr. C)

| Type       | Pinch | Bulb |
|------------|-------|------|
| MSR 400    | 350   | 700  |
| MSR 575/2  | 350   | 700  |
| MSR 700/2  | 350   | 700  |
| MSR 1200   | 350   | 700  |
| MSR 1200/2 | 350   | 700  |

| Type      | A    | B    | C      | D    | Type         | A    | B    | C      | D    |
|-----------|------|------|--------|------|--------------|------|------|--------|------|
|           | max. | nom. |        | max. |              | max. | nom. |        | max. |
| MSR 400   | 23.0 | 6.0  | 62±1.0 | 112  | MSR 700(/2)  | 30.0 | 8.0  | 75±1.0 | 155  |
| MSR 575/2 | 30.0 | 7.0  | 65±1.0 | 125  | MSR 1200(/2) | 40.0 | 10.0 | 85±1.0 | 175  |



Spectral power distribution



Light distribution

Ballast specifications for mains voltage 230 V

| Type of lamp  | Impedance Ω | Current A | Ballast losses W |
|---------------|-------------|-----------|------------------|
| MSR 400       | 30          | 7         | 50               |
| MSR 575/2     | 28          | 6.95      | 60               |
| MSR 700/2     | 19          | 11        | 55               |
| MSR 1200 (/2) | 14          | 13.8      | 120              |

Remark

Deviation in nominal mains voltage of more than +3% the ballast impedance must be adapted to prevent that the lamp is continuously burning at too high lamp wattage resulting in shorter life time.

Starter specifications

| Type of lamp  | Starting voltage min. | max.   |
|---------------|-----------------------|--------|
| MSR 400       | 1700 V                | 4500 V |
| MSR 575/2     | 1700 V                | 4500 V |
| MSR 700/2     | 1700 V                | 5000 V |
| MSR 1200 (/2) | 1700 V                | 5000 V |

Series and parallel starters can be used. Minimum starting voltage is 1700 V with min. 200 μsec at 10% of voltage peak. Minimum 2 peaks per half cycle between 60...90 and 240...270 degrees.

More detailed information can be found in our separate publication 'Directions for design of ballast and ignitors of MSR and MSI lamps.'