



13122/FKZ, 13528, 13529, 13711/FLT



13124/FKY



13125/GJT, 13131/GED



13158



13186/EPX/EPV



FLT faceted



13137/FHX, 13155/FJX, 13189/EPZ/DJT, 13194/DED



EPZ, DJT, 13160/DDS, 14501/DDL

Features

Halogen lamps with an internal reflector for use in microfilm and microfiche projectors. The glass reflectors of these lamps have a dichroic coating which reflects the light forward, but radiates about 75% of the generated heat backwards and thus away from the microfiche/film.

The halogen burner is precisely aligned using an optical system so that, when the lamp is replaced, no realignment is necessary. These lamps also offer the familiar advantages of all halogen lamps: negligible light output depreciation and high efficacy (thus low energy consumption).

Low voltage halogen lamps should not be dimmed by more than 10% of their rated voltage since this will result in a reduction in life.

Standard tungsten filament lamps (with no halogen filling), can be dimmed to zero volts, resulting in virtually endless life. However if low voltage tungsten halogen lamps are dimmed by more than 10%, the lamp will be operating at too low a temperature and the free halogens in the gas fill, will attack the cooler parts of the tungsten filament i.e. where enters the quartz or glass envelope. The wire at that point will then be eroded and eventually will fail.

So if dimmed by 10% or more, low voltage tungsten halogen lamps will not have an extended life but are unlikely even to reach their rated life.

Applications

Microfiche readers and projectors, microfilm readers and printers and jacket fillers (all also in combination with information retrieval systems), as well as in, for example, medical equipment.

Some types are nowadays also used in light boxes for lighting with fibres.



FF

| Type | ANSI code | J code | Cap/base | Lamp | Lamp | Colour temperature | Reflector diameter in mm | Reflector surface | Fig. | Burning position | Lamp life | Max. permissible pinch temp. degr. C* | Max. permissible bulb temp. degr. C* | Ordering number |
|-------|-----------|----------------|----------|---------|---------|--------------------|--------------------------|-------------------|------|------------------|-----------|---------------------------------------|--------------------------------------|-----------------|
| | | | | voltage | wattage | | | | | | | | | |
| 13124 | FKY | - | G3.9 | 6 | 9 | 3000 | 35 | smooth | 2 | S105 | 250 | 400 | 900 | 9238 997 10100 |
| 13529 | - | - | GZ4 | 6 | 9 | 3000 | 35 | smooth | 1 | S105 | 250 | 400 | 900 | 9238 961 10100 |
| 13528 | - | - | GZ4 | 6 | 15 | 2900 | 35 | smooth | 1 | S105 | 750 | 350 | 900 | 9238 838 10100 |
| 13122 | FKZ | - | GZ4 | 13,8 | 25 | 3100 | 35 | smooth | 1 | S105 | 250 | 400 | 900 | 9239 194 18200 |
| 13137 | FHX | - | GZ4 | 13,8 | 25 | 3100 | 50 | smooth | 3 | S105 | 250 | 400 | 900 | 9239 162 18200 |
| 13711 | FLT | - | GZ4 | 13,8 | 25 | 3100 | 35 | smooth | 1 | S105 | 250 | 400 | 900 | 9239 262 18200 |
| - | FLT | - | GZ4 | 13,8 | 25 | 3100 | 35 | facetted | 1 | S105 | 400 | 350 | 900 | 9247 962 18200 |
| 13155 | FJX | - | GX5.3 | 13,8 | 30 | 3150 | 50 | smooth | 3 | S105 | 500 | 350 | 900 | 9238 935 18200 |
| 13125 | GJT | - | Cable | 13,8 | 50 | 3150 | 50 | smooth | 4 | S105 | 1000 | 350 | 900 | 9239 195 18200 |
| 13189 | EPZ/DJT | - | GX5.3 | 13,8 | 50 | 3150 | 50 | smooth | 3 | S105 | 1000 | 350 | 900 | 9238 835 18200 |
| 13160 | DDS | - | GX5.3 | 21 | 80 | 3125 | 50 | facetted | 3 | S105 | 1000 | 350 | 900 | 9239 212 19800 |
| - | - | JCR 21V 80W | GX5.3 | 21 | 80 | 3125 | 50 | facetted | 3 | S105 | 500 | 350 | 900 | 9248 124 19800 |
| 13131 | GED | - | Cable | 13,8 | 85 | 3125 | 50 | smooth | 4 | S105 | 1000 | 350 | 900 | 9239 193 18200 |
| 13194 | DED | - | GX5.3 | 13,8 | 85 | 3150 | 50 | smooth | 3 | S105 | 1000 | 350 | 900 | 9238 836 18200 |
| 13186 | EPX/EPV | - | GX5.3 | 14,5 | 90 | 3200 | 50 | smooth | 3 | S105 | 500 | 350 | 900 | 9238 912 14900 |
| - | EPX | - | GX5.3 | 14,5 | 90 | 3150 | 50 | stippled | 3 | S105 | 500 | 350 | 900 | 9238 912 14900 |
| - | - | JCR 20V 115W | GX5.3 | 20 | 115 | - | 50 | facetted | 3 | S105 | 500 | 350 | 900 | 9248 122 19700 |
| 14501 | DDL | - | GX5.3 | 20 | 150 | 3150 | 50 | facetted | 3 | S105 | 500 | 350 | 900 | 9239 214 20500 |
| - | DDL-3 | DDL 20V 150W-3 | GX5.3 | 20 | 150 | 3150 | 50 | facetted | 3 | S90 | 500 | 350 | 900 | 9249 107 19700 |
| 13158 | ELD/EJN | - | GX5.3 | 21 | 150 | 3400 | 50 | stippled | 3 | S90 | 40 | 400 | 900 | 9239 213 19800 |

* Maximum permissible bulb temperature: 900°C

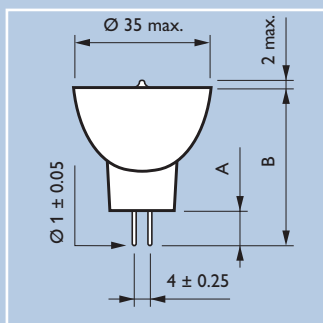


Fig. 1 Dimensions in mm

| Type | A | B |
|--------------|-----|----|
| 13529, 13528 | 6 | 40 |
| 13122, 13711 | 6 | 40 |
| FLT | 4.5 | 35 |

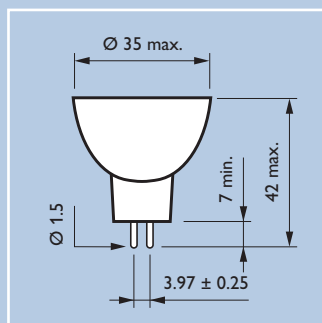


Fig. 2

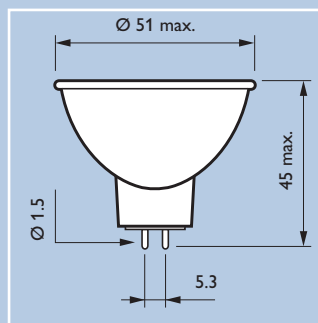


Fig. 3

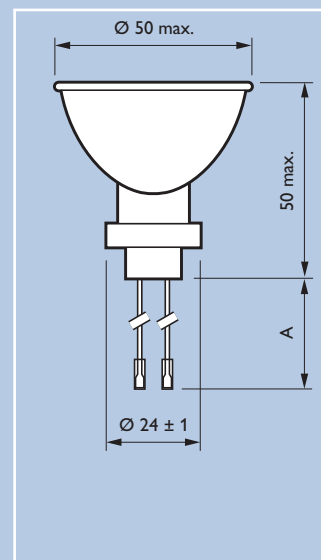
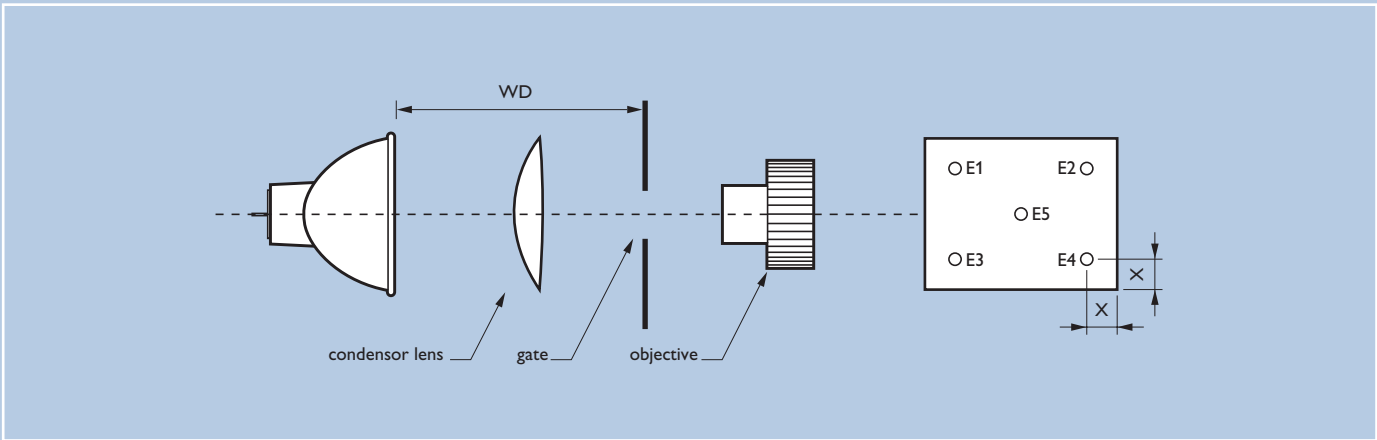


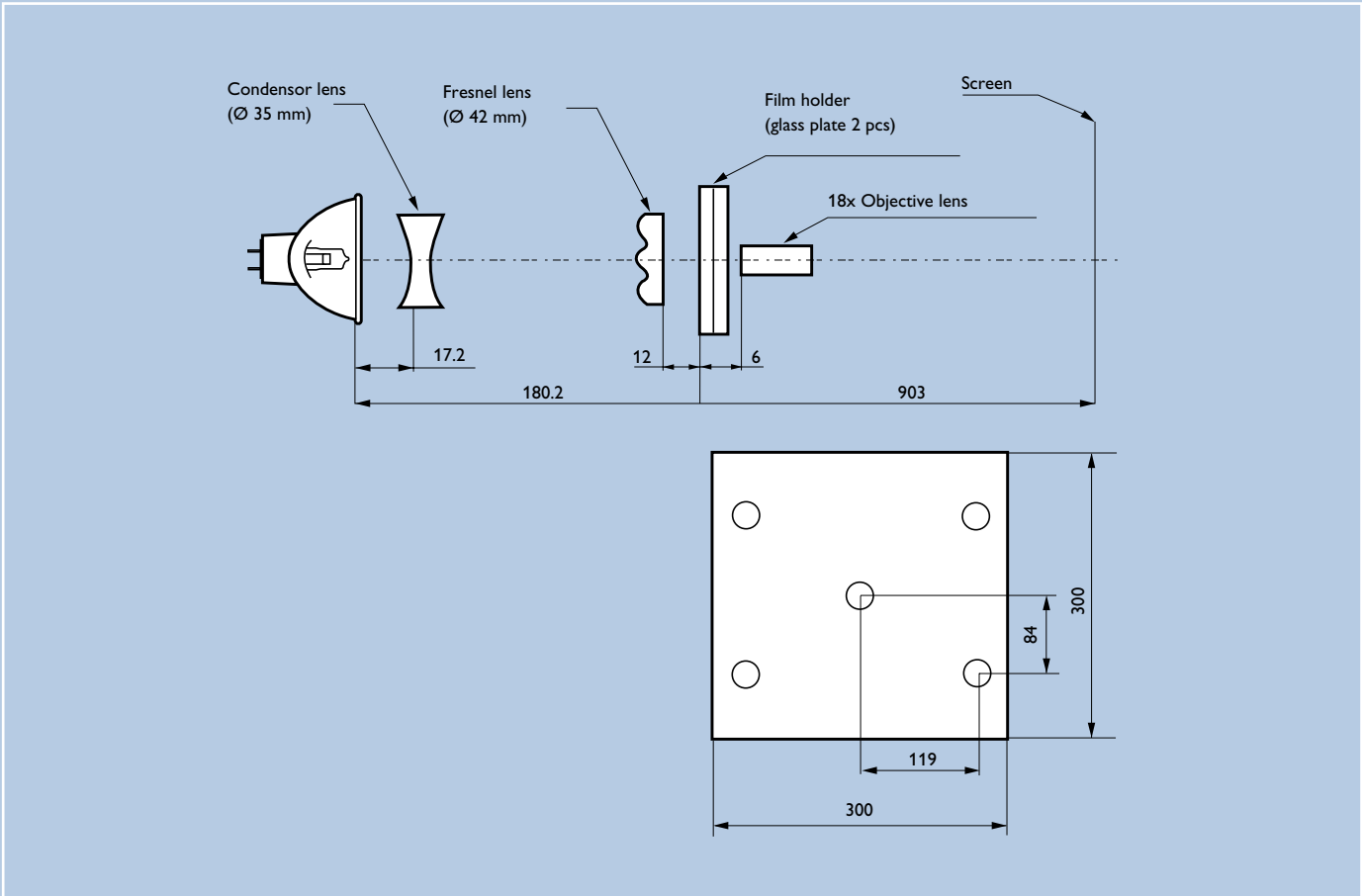
Fig. 4

| Type | A |
|--------------------------|-------------|
| Cap/base Special/ceramic | |
| 13125 | 190.0 ± 5.0 |
| 13131 | 75.0 ± 5.0 |

FF



Optical system, all lamps except JCR 21/80



Optical system JCR 21/80

| Type | ANSI Code | J Code | WD mm | Diameter gate mm | Condensor f mm | Objective f mm | Screen size | X/Y mm | Min.center intensity lx | Emax-Emin/ Emax % |
|-------|-----------|----------------|----------|--------------------------|----------------------|----------------------|----------------|-----------|-------------------------------|-------------------------|
| 13124 | FKY | - | 108 | 9.4 round | 60 | 17 | 279 x 356 | 40/40 | 170 | 50 |
| 13529 | - | - | 108 | 9.4 round | 60 | 17 | 279 x 356 | 40/40 | 170 | 50 |
| 13528 | - | - | 92 | 18 round | 42 | 20 | 279 x 356 | 40/40 | 700 | 20 |
| 13122 | FKZ | - | 92 | 18 round | 42 | 20 | 279 x 356 | 40/40 | 1100 | 50 |
| 13137 | FHX | - | 108 | 9.4 round | 60 | 17 | 279 x 356 | 40/40 | 400 | 60 |
| 13711 | FLT | - | 155 | 9.7 round | 53 | 15 | 279 x 356 | 40/40 | 400 | 50 |
| 13155 | FJX | - | 108 | 9.4 round | 60 | 17 | 279 x 356 | 40/40 | 330 | 50 |
| - | FJX | - | 108 | 9.4 round | no | 50 | 279 x 356 | 32.5/32.5 | 350 | 40 |
| 13125 | GJT | - | 108 | 9.4 round | 60 | 17 | 279 x 356 | 40/40 | 380 | 70 |
| 13189 | EPZ/DJT | - | 108 | 9.4 round | 60 | 17 | 279 x 356 | 40/40 | 380 | 70 |
| 13160 | DDS | - | 165 | 9.4 round | no | 50 | 279 x 356 | 32.5/32.5 | 250 | 80 |
| - | - | JCR 21V 80W | 17.2 | see drawing on left page | | | 300 x 300 | - | - | - |
| 13131 | GED | - | 165 | 16 round | 60 | 29 | 279 x 356 | 40/40 | 950 | 75 |
| 13194 | DED | - | 165 | 16 round | 60 | 29 | 279 x 356 | 40/40 | 1000 | 75 |
| 13186 | EPX/EPV | - | 155 | 18.3 round | yes | 33 | 279 x 356 | 40/40 | 1100 | 60 |
| - | EPX | - | 165.1 | 9.09 round | no | 50 | 420 x 420 | 40/40 | 250 | 75 |
| - | - | JCR 20V 115W | 185 | yes | no | 17 | 355 x 355 | 67.5/67.5 | 250 | 20 |
| 14501 | DDL | - | 194.5 | 9.4 round | no | 50 | 279 x 356 | 32.5/32.5 | 250 | 90 |
| - | DDL-3 | DDL 20V 150W-3 | 194.5 | 9.4 round | no | 50 | 279 x 356 | 32.5/32.5 | - | - |
| 13158 | ELD/EJN | - | 50.8 | 12 round | yes | 50 | 1113 x 835 | 58/58 | 780 | 30 |