

This fixed-focus lens is designed for use with Panasonic's applicable projectors.  
This lens is an ultra-short focal length lens which uses a mirror.

**NOTE:** The lens cannot be used by itself. It must be mounted onto the specified Panasonic DLP™ projector.

**Specifications**

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| F value:                | 2.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Focal distance (f):     | 5.3 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Throw ratio             | WUXGA 0.380:1 for PT-RZ120/RZ970/RZ870/RZ770/RZ660/DZ870/DZ780 (16:10 aspect ratio)<br>WXGA 0.399:1 for PT-RW930/RW730/RW620/DW830/DW750 (16:10 aspect ratio)<br>XGA 0.394:1 for PT-RX110/DX100/DX820 (4:3 aspect ratio)                                                                                                                                                                                                                                                                          |
| Dimensions (W × H × D): | 132 × 102 × 311 mm (5-3/16 × 4-1/32 × 12-1/4 inches)                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Weight:                 | Approx 1.3 kg (3.1 lbs)                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Applicable projector:   | [Group A]<br>PT-DZ870K/DZ870LK/DZ870W/DZ870LW/DW830K/DW830LK/DW830W/DW830LW/<br>DX100K/DX100LK/DX100W/DX100LW<br><br>[Group B]<br>PT-RZ120B/RZ120W/RZ120LB/RZ120LW/RZ970B/RZ970W/RZ970LB/RZ970LW/<br>RW930B/RW930W/RW930LB/RW930LW/RX110B/RX110W/RX110LB/RX110LW/<br>RZ870W/RZ870B/RZ870LW/RZ870LB/RZ770B/RZ770W/RZ770LB/RZ770LW/<br>RW730B/RW730W/RW730LB/RW730LW/RZ660B/RZ660W/RZ660LB/RZ660LW/<br>RW620B/RW620W/RW620LB/RW620LW/<br><br>[Group C]<br>PT-DZ780/DZ780L/DW750/DW750L/DX820/DX820L |

**Dimensions**

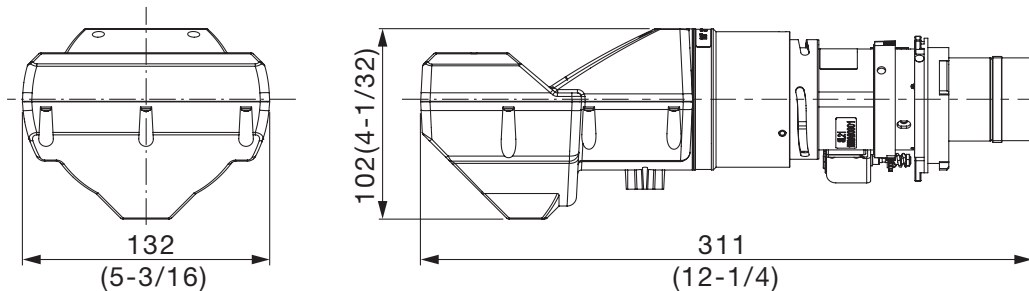
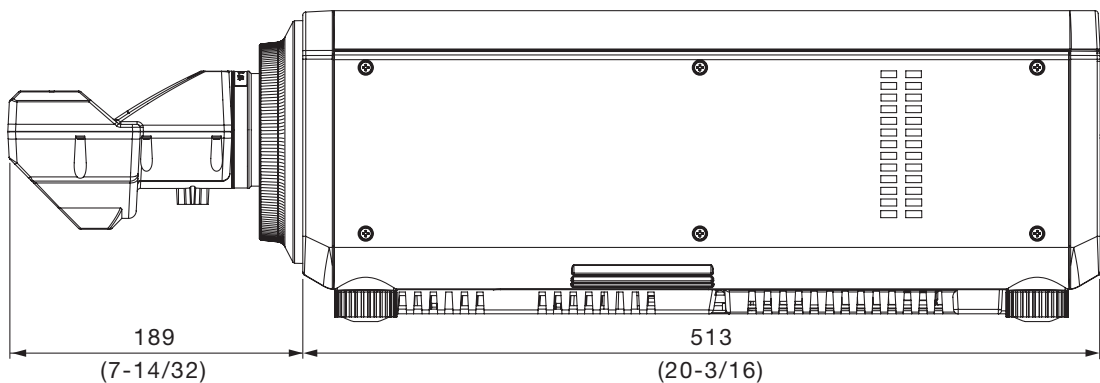


Illustration shows the lens attached to an applicable projector.

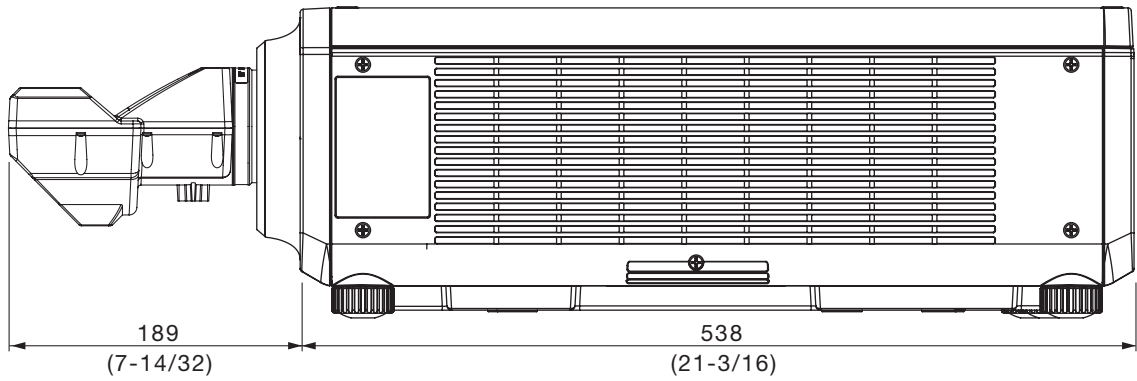
[Group A]



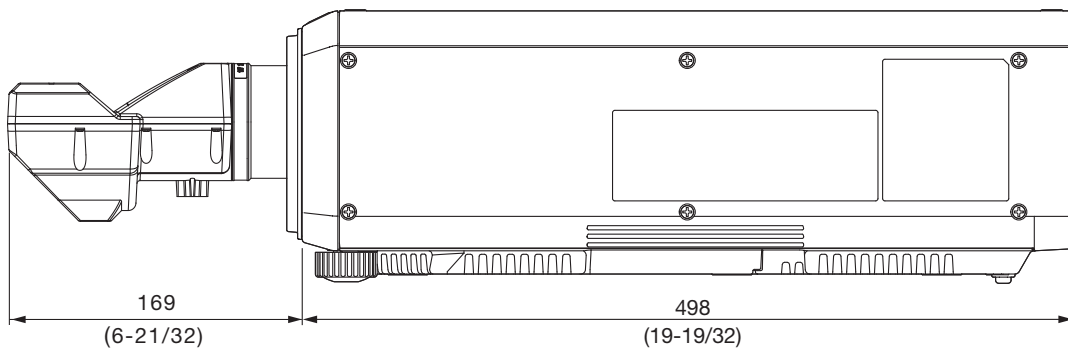
unit : mm (inch)

NOTE: This illustration is not drawn to scale.

[Group B]



[Group C]



unit : mm (inch)  
 NOTE: This illustration is not drawn to scale.

For information on the projection distance, refer to the specifications for the projector to which the lens will be mounted.  
 DLP is a trademark of Texas Instruments. Weights and dimensions shown are approximate. Specifications subject to change without notice.

ET-DLE035 Projection Distance Table

PT-RZ120/RZ970/RZ870/RZ770/RZ660/DZ870/DZ780

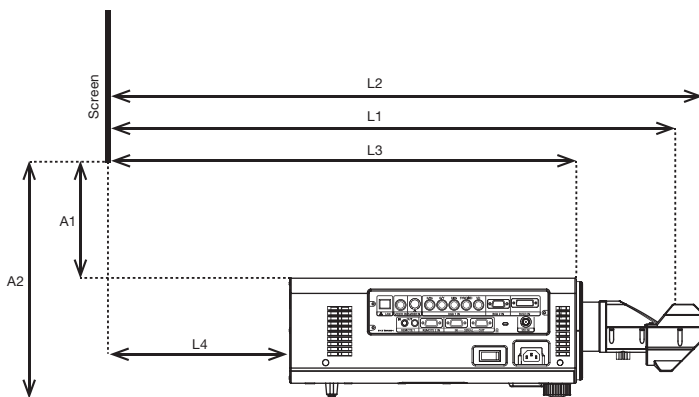
16 : 10 (WUXGA ; 1920 × 1200)

Unit : meters

| Ultra-short focal length lens ET-DLE035<br>Close-up system dimensions |                         |             |            |                                                                     |                                 |                                  |       |                                 |       |       |                                               |       |                                                  |  |
|-----------------------------------------------------------------------|-------------------------|-------------|------------|---------------------------------------------------------------------|---------------------------------|----------------------------------|-------|---------------------------------|-------|-------|-----------------------------------------------|-------|--------------------------------------------------|--|
| Throw ratio                                                           |                         |             |            | 0.380:1                                                             |                                 |                                  |       | From rear of set to screen (L4) |       |       | From top of set to bottom edge of screen (A1) |       | From bottom of set to bottom edge of screen (A2) |  |
| Diagonal image size (Inches)                                          | Diagonal image size (m) | Height (SH) | Width (SW) | Projection distance (From mirror reflective surface to screen) (L1) | From tip of lens to screen (L2) | From front of set to screen (L3) | RZ120 | DZ870                           | DZ780 | RZ120 | DZ780                                         | RZ120 | DZ780                                            |  |
|                                                                       |                         |             |            |                                                                     |                                 |                                  | RZ970 |                                 |       | RZ970 |                                               | RZ970 |                                                  |  |
|                                                                       |                         |             |            |                                                                     |                                 |                                  | RZ870 |                                 |       | RZ870 |                                               | RZ870 |                                                  |  |
|                                                                       |                         |             |            |                                                                     |                                 |                                  | RZ770 |                                 |       | RZ770 |                                               | RZ770 |                                                  |  |
|                                                                       |                         |             |            |                                                                     |                                 |                                  | RZ660 |                                 |       | RZ660 |                                               | RZ660 |                                                  |  |
|                                                                       |                         |             |            |                                                                     |                                 |                                  |       |                                 |       | DZ870 |                                               | DZ870 |                                                  |  |
| 100                                                                   | 2.54                    | 1.35        | 2.15       | 0.82                                                                | 0.84                            | 0.65                             | 0.11  | 0.14                            | 0.17  | 0.43  | 0.43                                          | 0.63  | 0.60                                             |  |
| 120                                                                   | 3.05                    | 1.62        | 2.59       | 0.98                                                                | 1.00                            | 0.82                             | 0.28  | 0.30                            | 0.34  | 0.53  | 0.54                                          | 0.73  | 0.71                                             |  |
| 150                                                                   | 3.81                    | 2.02        | 3.23       | 1.23                                                                | 1.25                            | 1.06                             | 0.52  | 0.55                            | 0.58  | 0.68  | 0.69                                          | 0.88  | 0.86                                             |  |
| 200                                                                   | 5.08                    | 2.69        | 4.31       | 1.63                                                                | 1.66                            | 1.47                             | 0.93  | 0.95                            | 0.99  | 0.93  | 0.94                                          | 1.13  | 1.11                                             |  |
| 250                                                                   | 6.35                    | 3.37        | 5.39       | 2.04                                                                | 2.06                            | 1.87                             | 1.34  | 1.36                            | 1.40  | 1.18  | 1.19                                          | 1.38  | 1.36                                             |  |
| 300                                                                   | 7.62                    | 4.04        | 6.46       | 2.45                                                                | 2.47                            | 2.28                             | 1.74  | 1.77                            | 1.80  | 1.43  | 1.44                                          | 1.63  | 1.61                                             |  |
| 350                                                                   | 8.89                    | 4.71        | 7.54       | 2.85                                                                | 2.88                            | 2.69                             | 2.15  | 2.18                            | 2.21  | 1.69  | 1.69                                          | 1.89  | 1.87                                             |  |

Unit : feet

| Ultra-short focal length lens ET-DLE035<br>Close-up system dimensions |                         |             |            |                                                                     |                                 |                                  |       |                                 |       |       |                                               |       |                                                  |  |
|-----------------------------------------------------------------------|-------------------------|-------------|------------|---------------------------------------------------------------------|---------------------------------|----------------------------------|-------|---------------------------------|-------|-------|-----------------------------------------------|-------|--------------------------------------------------|--|
| Throw ratio                                                           |                         |             |            | 0.380:1                                                             |                                 |                                  |       | From rear of set to screen (L4) |       |       | From top of set to bottom edge of screen (A1) |       | From bottom of set to bottom edge of screen (A2) |  |
| Diagonal image size (Inches)                                          | Diagonal image size (m) | Height (SH) | Width (SW) | Projection distance (From mirror reflective surface to screen) (L1) | From tip of lens to screen (L2) | From front of set to screen (L3) | RZ120 | DZ870                           | DZ780 | RZ120 | DZ780                                         | RZ120 | DZ780                                            |  |
|                                                                       |                         |             |            |                                                                     |                                 |                                  | RZ970 |                                 |       | RZ970 |                                               | RZ970 |                                                  |  |
|                                                                       |                         |             |            |                                                                     |                                 |                                  | RZ870 |                                 |       | RZ870 |                                               | RZ870 |                                                  |  |
|                                                                       |                         |             |            |                                                                     |                                 |                                  | RZ770 |                                 |       | RZ770 |                                               | RZ770 |                                                  |  |
|                                                                       |                         |             |            |                                                                     |                                 |                                  | RZ660 |                                 |       | RZ660 |                                               | RZ660 |                                                  |  |
|                                                                       |                         |             |            |                                                                     |                                 |                                  |       |                                 |       | DZ870 |                                               | DZ870 |                                                  |  |
| 100                                                                   | 2.54                    | 4.4         | 7.1        | 2.7                                                                 | 2.8                             | 2.1                              | 0.4   | 0.5                             | 0.6   | 1.4   | 1.4                                           | 2.1   | 2.0                                              |  |
| 120                                                                   | 3.05                    | 5.3         | 8.5        | 3.2                                                                 | 3.3                             | 2.7                              | 0.9   | 1.0                             | 1.1   | 1.7   | 1.8                                           | 2.4   | 2.3                                              |  |
| 150                                                                   | 3.81                    | 6.6         | 10.6       | 4.0                                                                 | 4.1                             | 3.5                              | 1.7   | 1.8                             | 1.9   | 2.2   | 2.3                                           | 2.9   | 2.8                                              |  |
| 200                                                                   | 5.08                    | 8.8         | 14.1       | 5.4                                                                 | 5.4                             | 4.8                              | 3.0   | 3.1                             | 3.2   | 3.1   | 3.1                                           | 3.7   | 3.6                                              |  |
| 250                                                                   | 6.35                    | 11.0        | 17.7       | 6.7                                                                 | 6.8                             | 6.1                              | 4.4   | 4.5                             | 4.6   | 3.9   | 3.9                                           | 4.5   | 4.5                                              |  |
| 300                                                                   | 7.62                    | 13.3        | 21.2       | 8.0                                                                 | 8.1                             | 7.5                              | 5.7   | 5.8                             | 6.0   | 4.7   | 4.7                                           | 5.4   | 5.3                                              |  |
| 350                                                                   | 8.89                    | 15.5        | 24.7       | 9.4                                                                 | 9.4                             | 8.8                              | 7.1   | 7.1                             | 7.3   | 5.5   | 5.5                                           | 6.2   | 6.1                                              |  |



- L1: Projection distance (from screen to mirror reflective surface)
- L2: From screen to tip of lens
- L3: From screen to front of set
- L4: From screen to rear of set
- A1: From bottom edge of screen to top of set
- A2: From bottom edge of screen to bottom of set

Projection Distance Calculation Table

Screen aspect ratio 16:10

Projection distance calculation formula

$$L1 \text{ (m)} = 0.3205 \times \text{Diagonal image size} + 0.0047$$

Calculation formula for distance from top of set to bottom edge of screen

|                                     |                                                |
|-------------------------------------|------------------------------------------------|
| RZ120/RZ970/RZ870/RZ770/RZ660/DZ870 | A1 (m) = 0.1977 x Diagonal image size - 0.0721 |
| DZ780                               | A1 (m) = 0.1977 x Diagonal image size - 0.0671 |

PT-RW930/RW730/RW620/DW830/DW750

16 : 10 (WXGA ; 1280 × 800)

Unit : meters

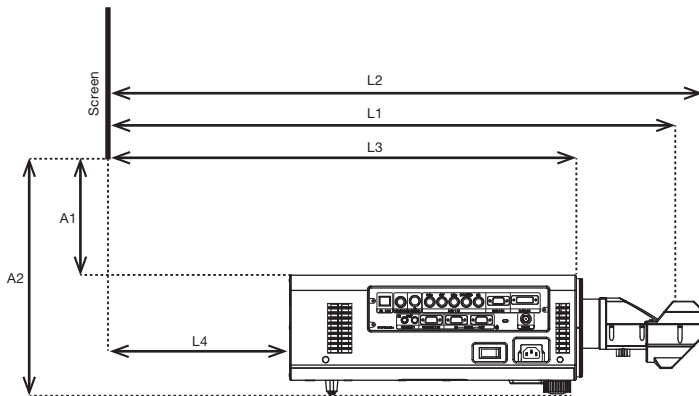
Ultra-short focal length lens ET-DLE035  
Close-up system dimensions

| Diagonal image size (Inches) | Diagonal image size (m) | Height (SH) | Width (SW) | Projection distance (From mirror reflective surface to screen) (L1) | From tip of lens to screen (L2) | From front of set to screen (L3) | From rear of set to screen (L4) |       |       | From top of set to bottom edge of screen (A1) |                                  | From bottom of set to bottom edge of screen (A2) |  |
|------------------------------|-------------------------|-------------|------------|---------------------------------------------------------------------|---------------------------------|----------------------------------|---------------------------------|-------|-------|-----------------------------------------------|----------------------------------|--------------------------------------------------|--|
|                              |                         |             |            |                                                                     |                                 |                                  | RW930<br>RW730<br>RW620         | DW830 | DW750 | RW930<br>RW730<br>RW620<br>DW830<br>DW750     | RW930<br>RW730<br>RW620<br>DW830 | DW750                                            |  |
| 100                          | 2.54                    | 1.35        | 2.15       | 0.86                                                                | 0.88                            | 0.69                             | 0.16                            | 0.18  | 0.22  | 0.59                                          | 0.79                             | 0.76                                             |  |
| 120                          | 3.05                    | 1.62        | 2.59       | 1.03                                                                | 1.05                            | 0.86                             | 0.33                            | 0.35  | 0.39  | 0.72                                          | 0.92                             | 0.89                                             |  |
| 150                          | 3.81                    | 2.02        | 3.23       | 1.29                                                                | 1.31                            | 1.12                             | 0.58                            | 0.61  | 0.64  | 0.92                                          | 1.12                             | 1.09                                             |  |
| 200                          | 5.08                    | 2.69        | 4.31       | 1.71                                                                | 1.74                            | 1.55                             | 1.01                            | 1.04  | 1.07  | 1.25                                          | 1.45                             | 1.42                                             |  |
| 250                          | 6.35                    | 3.37        | 5.39       | 2.14                                                                | 2.16                            | 1.98                             | 1.44                            | 1.46  | 1.50  | 1.58                                          | 1.78                             | 1.75                                             |  |
| 300                          | 7.62                    | 4.04        | 6.46       | 2.57                                                                | 2.59                            | 2.40                             | 1.86                            | 1.89  | 1.92  | 1.91                                          | 2.11                             | 2.08                                             |  |
| 350                          | 8.89                    | 4.71        | 7.54       | 3.00                                                                | 3.02                            | 2.83                             | 2.29                            | 2.32  | 2.35  | 2.24                                          | 2.44                             | 2.41                                             |  |

Unit : feet

Ultra-short focal length lens ET-DLE035  
Close-up system dimensions

| Diagonal image size (Inches) | Diagonal image size (m) | Height (SH) | Width (SW) | Projection distance (From mirror reflective surface to screen) (L1) | From tip of lens to screen (L2) | From front of set to screen (L3) | From rear of set to screen (L4) |       |       | From top of set to bottom edge of screen (A1) |                                  | From bottom of set to bottom edge of screen (A2) |  |
|------------------------------|-------------------------|-------------|------------|---------------------------------------------------------------------|---------------------------------|----------------------------------|---------------------------------|-------|-------|-----------------------------------------------|----------------------------------|--------------------------------------------------|--|
|                              |                         |             |            |                                                                     |                                 |                                  | RW930<br>RW730<br>RW620         | DW830 | DW750 | RW930<br>RW730<br>RW620<br>DW830<br>DW750     | RW930<br>RW730<br>RW620<br>DW830 | DW750                                            |  |
| 100                          | 2.54                    | 4.4         | 7.1        | 2.8                                                                 | 2.9                             | 2.3                              | 0.5                             | 0.6   | 0.7   | 1.9                                           | 2.6                              | 2.5                                              |  |
| 120                          | 3.05                    | 5.3         | 8.5        | 3.4                                                                 | 3.5                             | 2.8                              | 1.1                             | 1.2   | 1.3   | 2.4                                           | 3.0                              | 2.9                                              |  |
| 150                          | 3.81                    | 6.6         | 10.6       | 4.2                                                                 | 4.3                             | 3.7                              | 1.9                             | 2.0   | 2.1   | 3.0                                           | 3.7                              | 3.6                                              |  |
| 200                          | 5.08                    | 8.8         | 14.1       | 5.6                                                                 | 5.7                             | 5.1                              | 3.3                             | 3.4   | 3.5   | 4.1                                           | 4.7                              | 4.7                                              |  |
| 250                          | 6.35                    | 11.0        | 17.7       | 7.0                                                                 | 7.1                             | 6.5                              | 4.7                             | 4.8   | 4.9   | 5.2                                           | 5.8                              | 5.7                                              |  |
| 300                          | 7.62                    | 13.3        | 21.2       | 8.4                                                                 | 8.5                             | 7.9                              | 6.1                             | 6.2   | 6.3   | 6.3                                           | 6.9                              | 6.8                                              |  |
| 350                          | 8.89                    | 15.5        | 24.7       | 9.8                                                                 | 9.9                             | 9.3                              | 7.5                             | 7.6   | 7.7   | 7.3                                           | 8.0                              | 7.9                                              |  |



- L1: Projection distance (from screen to mirror reflective surface)
- L2: From screen to tip of lens
- L3: From screen to front of set
- L4: From screen to rear of set
- A1: From bottom edge of screen to top of set
- A2: From bottom edge of screen to bottom of set

Projection Distance Calculation Table

Screen aspect ratio 16:10

Projection distance calculation formula

$$L1 \text{ (m)} = 0.3365 \times \text{Diagonal image size} + 0.0047$$

Calculation formula for distance from top of set to bottom edge of screen

|                         |                                                |
|-------------------------|------------------------------------------------|
| RW930/RW730/RW620/DW830 | A1 (m) = 0.2597 × Diagonal image size - 0.0740 |
| DW750                   | A1 (m) = 0.2597 × Diagonal image size - 0.0690 |

PT-RX110/DX100/DX820

4 : 3 (XGA ; 1024 x 768)

Unit : meters

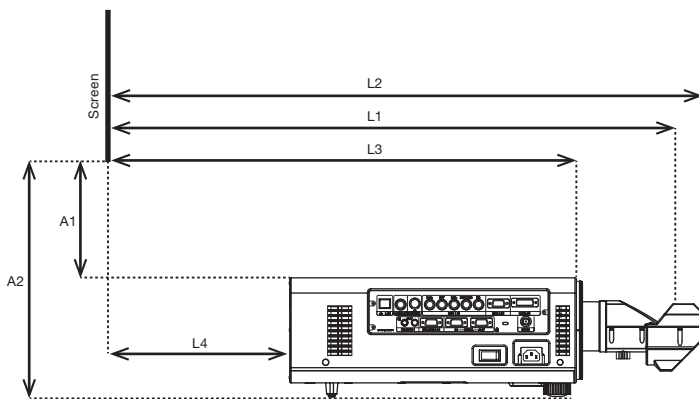
Ultra-short focal length lens ET-DLE035  
Close-up system dimensions

| Throw ratio                  |                         | 0.394:1     |            |                                                                     |                                 | From rear of set to screen (L4)  |             | From top of set to bottom edge of screen (A1) |             | From bottom of set to bottom edge of screen (A2) |             |       |
|------------------------------|-------------------------|-------------|------------|---------------------------------------------------------------------|---------------------------------|----------------------------------|-------------|-----------------------------------------------|-------------|--------------------------------------------------|-------------|-------|
| Diagonal image size (Inches) | Diagonal image size (m) | Height (SH) | Width (SW) | Projection distance (From mirror reflective surface to screen) (L1) | From tip of lens to screen (L2) | From front of set to screen (L3) | RX110 DX100 | DX820                                         | RX110 DX100 | DX820                                            | RX110 DX100 | DX820 |
| 100                          | 2.54                    | 1.52        | 2.03       | 0.80                                                                | 0.82                            | 0.63                             | 0.12        | 0.16                                          | 0.41        | 0.41                                             | 0.61        | 0.59  |
| 120                          | 3.05                    | 1.83        | 2.44       | 0.96                                                                | 0.98                            | 0.79                             | 0.28        | 0.32                                          | 0.50        | 0.51                                             | 0.70        | 0.68  |
| 150                          | 3.81                    | 2.29        | 3.05       | 1.20                                                                | 1.22                            | 1.03                             | 0.52        | 0.55                                          | 0.65        | 0.65                                             | 0.85        | 0.83  |
| 200                          | 5.08                    | 3.05        | 4.06       | 1.60                                                                | 1.62                            | 1.43                             | 0.92        | 0.95                                          | 0.88        | 0.89                                             | 1.08        | 1.06  |
| 250                          | 6.35                    | 3.81        | 5.08       | 1.99                                                                | 2.02                            | 1.83                             | 1.32        | 1.35                                          | 1.12        | 1.13                                             | 1.32        | 1.30  |
| 300                          | 7.62                    | 4.57        | 6.10       | 2.39                                                                | 2.42                            | 2.23                             | 1.71        | 1.75                                          | 1.36        | 1.37                                             | 1.56        | 1.54  |
| 350                          | 8.89                    | 5.33        | 7.11       | 2.79                                                                | 2.81                            | 2.62                             | 2.11        | 2.15                                          | 1.60        | 1.61                                             | 1.80        | 1.78  |

Unit : feet

Ultra-short focal length lens ET-DLE035  
Close-up system dimensions

| Throw ratio                  |                         | 0.394:1     |            |                                                                     |                                 | From rear of set to screen (L4)  |             | From top of set to bottom edge of screen (A1) |             | From bottom of set to bottom edge of screen (A2) |             |       |
|------------------------------|-------------------------|-------------|------------|---------------------------------------------------------------------|---------------------------------|----------------------------------|-------------|-----------------------------------------------|-------------|--------------------------------------------------|-------------|-------|
| Diagonal image size (Inches) | Diagonal image size (m) | Height (SH) | Width (SW) | Projection distance (From mirror reflective surface to screen) (L1) | From tip of lens to screen (L2) | From front of set to screen (L3) | RX110 DX100 | DX820                                         | RX110 DX100 | DX820                                            | RX110 DX100 | DX820 |
| 100                          | 2.54                    | 5.0         | 6.7        | 2.6                                                                 | 2.7                             | 2.1                              | 0.4         | 0.52                                          | 1.3         | 1.3                                              | 2.0         | 1.9   |
| 120                          | 3.05                    | 6.0         | 8.0        | 3.1                                                                 | 3.2                             | 2.6                              | 0.9         | 1.0                                           | 1.6         | 1.7                                              | 2.3         | 2.2   |
| 150                          | 3.81                    | 7.5         | 10.0       | 3.9                                                                 | 4.0                             | 3.4                              | 1.7         | 1.8                                           | 2.1         | 2.1                                              | 2.8         | 2.7   |
| 200                          | 5.08                    | 10.0        | 13.3       | 5.2                                                                 | 5.3                             | 4.7                              | 3.0         | 3.1                                           | 2.9         | 2.9                                              | 3.6         | 3.5   |
| 250                          | 6.35                    | 12.5        | 16.7       | 6.5                                                                 | 6.6                             | 6.0                              | 4.3         | 4.4                                           | 3.7         | 3.7                                              | 4.3         | 4.3   |
| 300                          | 7.62                    | 15.0        | 20.0       | 7.8                                                                 | 7.9                             | 7.3                              | 5.6         | 5.7                                           | 4.5         | 4.5                                              | 5.1         | 5.1   |
| 350                          | 8.89                    | 17.5        | 23.3       | 9.2                                                                 | 9.2                             | 8.6                              | 6.9         | 7.1                                           | 5.3         | 5.3                                              | 5.9         | 5.8   |



- L1: Projection distance  
(from screen to mirror reflective surface)
- L2: From screen to tip of lens
- L3: From screen to front of set
- L4: From screen to rear of set
- A1: From bottom edge of screen to top of set
- A2: From bottom edge of screen to bottom of set

Projection Distance Calculation Table

Screen aspect ratio 4:3

Projection distance calculation formula

|                                                              |
|--------------------------------------------------------------|
| $L1 (m) = 0.3133 \times \text{Diagonal image size} + 0.0047$ |
|--------------------------------------------------------------|

Calculation formula for distance from top of set to bottom edge of screen

|             |                                                              |
|-------------|--------------------------------------------------------------|
| RX110/DX100 | $A1 (m) = 0.1881 \times \text{Diagonal image size} - 0.0715$ |
| DX82        | $A1 (m) = 0.1881 \times \text{Diagonal image size} - 0.0665$ |