

$\Theta\epsilon\mu\alpha$ 1

(α)

$$\begin{pmatrix} A & B \\ C & D \end{pmatrix} = \begin{pmatrix} 0.95370 & 3.33333 \text{ mm} \\ -0.03092 \text{ mm}^{-1} & 0.94048 \end{pmatrix}$$

(β)

$$\begin{aligned} r = v &= \frac{D - 1}{C} = 1.925 \text{ mm} \\ s = w &= \frac{1 - A}{C} = -1.497 \text{ mm} \\ f_1 &= \frac{1}{C} = -32.342 \text{ mm} \\ f_2 &= -\frac{1}{C} = +32.342 \text{ mm} \end{aligned}$$

(γ)

$$\begin{aligned} f_2 &= 32.342 \text{ mm} \\ F_2 V_2 &= 30.844 \text{ mm} \\ f_2^{Thin} &= 31.50 \text{ mm} \end{aligned}$$

(δ)

$$\begin{aligned} OV_1 &= 75.000 \text{ mm} \\ s &= 76.925 \text{ mm} \\ s' &= 55.804 \text{ mm} \\ V_2 I &= 54.307 \text{ mm} \\ m &= -0.725 \end{aligned}$$

$\Theta\epsilon\mu\alpha$ 2

(α)

Luminous Efficiency = 0.8785%

(β)

Luminous Power = 1800 *lumens*

(γ)

$$P_{eR} = 3.315 \text{ Watts}$$

$$P_{eG} = 1.4484 \text{ Watts}$$

$$P_{eB} = 9.6557 \text{ Watts}$$

$\Theta\epsilon\mu\alpha$ 3

(α)

$$L = 83.33 \text{ cm}$$

(β)

$$\text{Shift} = 83.33 \text{ mm}$$

(γ)

$$\Delta = 150 \text{ nm}$$

$\Theta\epsilon\mu\alpha$ 4

(α)

Forward Orders		Backward Orders	
i	θ''_i (deg)	i	θ'_i (deg)
-2	Not defined	-2	Not defined
-1	+42.56	-1	Not defined
0	+19.47	0	-30.00
+1	- 0.55	+1	+ 0.83
+2	-20.65	+2	+31.94
+3	-44.08	+3	Not defined
+4	Not defined	+4	Not defined

(β)

$$\frac{d\theta''_{+1}}{d\lambda_0} = -0.6667 \text{ rad}/\mu\text{m}$$

$$\frac{d\theta''_{+2}}{d\lambda_0} = -1.4249 \text{ rad}/\mu\text{m}$$