

Table 1. Median values and 68% confidence interval for OGLE-TR-1086.

Parameter	Units	Values
Stellar Parameters:		
M_*	Mass (M_\odot)	$1.004^{+0.12}_{-0.090}$
R_*	Radius (R_\odot)	$2.07^{+1.7}_{-0.47}$
$R_{*,SED}$	Radius ¹ (R_\odot)	$2.13^{+1.7}_{-0.47}$
L_*	Luminosity (L_\odot)	$2.48^{+5.0}_{-0.93}$
F_{Bol}	Bolometric Flux (cgs)	$0.0000000000272^{+0.00000000000023}_{-0.00000000000021}$
ρ_*	Density (cgs)	$0.16^{+0.19}_{-0.13}$
$\log g$	Surface gravity (cgs)	$3.81^{+0.22}_{-0.51}$
T_{eff}	Effective Temperature (K)	5010^{+210}_{-200}
$T_{eff,SED}$	Effective Temperature ¹ (K)	4930^{+180}_{-170}
[Fe/H]	Metallicity (dex)	$0.00^{+0.38}_{-0.45}$
[Fe/H] ₀	Initial Metallicity ²	$-0.01^{+0.38}_{-0.45}$
Age	Age (Gyr)	$11.2^{+2.0}_{-4.4}$
EEP	Equal Evolutionary Phase ³	470^{+19}_{-12}
A_V	V-band extinction (mag)	$1.339^{+0.071}_{-0.14}$
σ_{SED}	SED photometry error scaling	$13.6^{+2.1}_{-1.7}$
ϖ	Parallax (mas)	$0.58^{+0.15}_{-0.25}$
d	Distance (pc)	1710^{+1200}_{-350}
Planetary Parameters:		
		b
P	Period (days)	$6.703196^{+0.000053}_{-0.000041}$
R_p	Radius (R_J)	$1.42^{+1.9}_{-0.38}$
M_p	Mass ⁴ (M_J)	120^{+200}_{-100}
T_C	Time of conjunction ⁵ (BJD _{TDB})	$2455383.100^{+0.012}_{-0.017}$
T_T	Time of minimum projected separation ⁶ (BJD _{TDB})	$2455383.100^{+0.012}_{-0.017}$
T_0	Optimal conjunction Time ⁷ (BJD _{TDB})	$2457152.7434^{+0.0058}_{-0.0068}$
a	Semi-major axis (AU)	$0.0720^{+0.0058}_{-0.0023}$
i	Inclination (Degrees)	$84.5^{+3.0}_{-6.8}$
T_{eq}	Equilibrium temperature ⁸ (K)	1310^{+340}_{-140}
τ_{circ}	Tidal circularization timescale (Gyr)	89^{+440}_{-76}
K	RV semi-amplitude ⁴ (m/s)	11800^{+16000}_{-9700}
R_p/R_*	Radius of planet in stellar radii	$0.0714^{+0.017}_{-0.0058}$
a/R_*	Semi-major axis in stellar radii	$7.4^{+2.1}_{-3.0}$
δ	$(R_p/R_*)^2$	$0.00510^{+0.0027}_{-0.00079}$
δ_I	Transit depth in I (fraction)	$0.00521^{+0.00047}_{-0.00046}$
δ_V	Transit depth in V (fraction)	$0.00522^{+0.00093}_{-0.0018}$
τ	Ingress/egress transit duration (days)	$0.030^{+0.11}_{-0.013}$
T_{14}	Total transit duration (days)	$0.237^{+0.043}_{-0.022}$

Table 1 continued on next page

Table 1 (continued)

Parameter	Units	Values	
T_{FWHM} ..	FWHM transit duration (days)	0.193 ^{+0.018} _{-0.047}	
b	Transit Impact parameter	0.72 ^{+0.21} _{-0.31}	
$\delta_{S,2.5\mu m}$..	Blackbody eclipse depth at 2.5 μm (ppm)	131 ⁺⁴³⁰ ₋₆₃	
$\delta_{S,5.0\mu m}$..	Blackbody eclipse depth at 5.0 μm (ppm)	480 ⁺⁸⁵⁰ ₋₁₇₀	
$\delta_{S,7.5\mu m}$..	Blackbody eclipse depth at 7.5 μm (ppm)	690 ⁺¹⁰⁰⁰ ₋₂₁₀	
ρ_P	Density ⁴ (cgs)	21 ⁺³⁶ ₋₁₃	
$\log g_P$..	Surface gravity ⁴	4.92 ^{+0.21} _{-0.30}	
Θ	Safronov Number	11.4 ^{+3.5} _{-8.8}	
$\langle F \rangle$	Incident Flux (10 ⁹ erg s ⁻¹ cm ⁻²)	0.67 ^{+1.0} _{-0.25}	
T_P	Time of Periastron (BJD _{TDB})	2455383.100 ^{+0.012} _{-0.017}	
T_S	Time of eclipse (BJD _{TDB})	2455379.748 ^{+0.012} _{-0.017}	
T_A	Time of Ascending Node (BJD _{TDB})	2455388.127 ^{+0.012} _{-0.017}	
T_D	Time of Descending Node (BJD _{TDB})	2455384.776 ^{+0.012} _{-0.017}	
V_c/V_e	1.00	
$M_P \sin i$..	Minimum mass ⁴ (M_J)	120 ⁺²⁰⁰ ₋₁₀₀	
M_P/M_* ..	Mass ratio ⁴	0.108 ^{+0.18} _{-0.089}	
d/R_* ..	Separation at mid transit	7.4 ^{+2.1} _{-3.0}	
P_T	A priori non-grazing transit prob	0.125 ^{+0.081} _{-0.027}	
$P_{T,G}$	A priori transit prob	0.144 ^{+0.11} _{-0.032}	
Wavelength Parameters:		I	V
u_1	linear limb-darkening coeff	0.399 ^{+0.063} _{-0.071}	0.637 ^{+0.087} _{-0.097}
u_2	quadratic limb-darkening coeff	0.221 \pm 0.055	0.143 ^{+0.077} _{-0.069}
Transit Parameters:		OGLE UT 2010-07-05 (I)	OGLE UT 2010-07-05 (V)
σ^2	Added Variance	0.00003572 ^{+0.00000056} _{-0.00000054}	0.0000407 ^{+0.00000065} _{-0.00000058}
F_0	Baseline flux	1.000147 \pm 0.000059	0.99989 ^{+0.00055} _{-0.00054}

See Table 3 in Eastman, J. et al., 2019, arXiv:1907.09480 for a detailed description of all parameters

¹This value ignores the systematic error and is for reference only

²The metallicity of the star at birth

³Corresponds to static points in a star's evolutionary history. See §2 in Dotter, A., 2016, ApJS, 222, 8

⁴Uses measured radius and estimated mass from Chen, J., & Kipping, D. 2017, ApJ, 834, 17

⁵Time of conjunction is commonly reported as the "transit time"

⁶Time of minimum projected separation is a more correct "transit time"

⁷Optimal time of conjunction minimizes the covariance between T_C and Period

⁸Assumes no albedo and perfect redistribution