

Table 1. Median values and 68% confidence interval for OGLE-TR-1094.

Parameter	Units	Values
Stellar Parameters:		
M_*	Mass (M_\odot)	$1.006^{+0.041}_{-0.050}$
R_*	Radius (R_\odot)	$1.65^{+0.17}_{-0.21}$
$R_{*,\text{SED}}$..	Radius ¹ (R_\odot)	$1.79^{+0.18}_{-0.21}$
L_*	Luminosity (L_\odot)	$1.49^{+0.28}_{-0.27}$
F_{Bol}	Bolometric Flux (cgs)	$0.0000000000230^{+0.000000000010}_{-0.000000000011}$
ρ_*	Density (cgs)	$0.315^{+0.16}_{-0.079}$
$\log g$	Surface gravity (cgs)	$4.006^{+0.12}_{-0.084}$
T_{eff}	Effective Temperature (K)	4990^{+170}_{-160}
$T_{\text{eff,SED}}$..	Effective Temperature ¹ (K)	4780^{+140}_{-120}
[Fe/H]..	Metallicity (dex)	$0.35^{+0.13}_{-0.33}$
[Fe/H] ₀ ..	Initial Metallicity ²	$0.35^{+0.12}_{-0.31}$
Age	Age (Gyr)	$12.61^{+0.89}_{-1.7}$
EEP	Equal Evolutionary Phase ³	$461.1^{+6.0}_{-10.}$
A_V	V-band extinction (mag)	$1.813^{+0.038}_{-0.084}$
σ_{SED}	SED photometry error scaling	$10.9^{+2.0}_{-1.5}$
ϖ	Parallax (mas)	$0.692^{+0.071}_{-0.056}$
d	Distance (pc)	1450 ± 130
Planetary Parameters:		
b		
P	Period (days)	$13.20038^{+0.00018}_{-0.00017}$
R_P	Radius (R_J)	$1.62^{+0.16}_{-0.20}$
M_P	Mass ⁴ (M_J)	$0.404^{+0.46}_{-0.027}$
T_C	Time of conjunction ⁵ (BJD _{TDB})	$2455388.402^{+0.023}_{-0.026}$
T_T	Time of minimum projected separation ⁶ (BJD _{TDB})	$2455388.402^{+0.023}_{-0.026}$
T_0	Optimal conjunction Time ⁷ (BJD _{TDB})	$2457038.449^{+0.010}_{-0.011}$
a	Semi-major axis (AU)	$0.1096^{+0.0015}_{-0.0018}$
i	Inclination (Degrees)	$89.18^{+0.58}_{-0.88}$
T_{eq}	Equilibrium temperature ⁸ (K)	929^{+41}_{-44}
τ_{circ}	Tidal circularization timescale (Gyr)	$7.7^{+25}_{-2.8}$
K	RV semi-amplitude ⁴ (m/s)	$34.6^{+40}_{-2.6}$
R_P/R_* ..	Radius of planet in stellar radii	$0.1012^{+0.0062}_{-0.0063}$
a/R_* ...	Semi-major axis in stellar radii	$14.3^{+2.1}_{-1.3}$
δ	$(R_P/R_*)^2$	$0.0102^{+0.0013}_{-0.0012}$
δ_I	Transit depth in I (fraction)	0.0128 ± 0.0015
δ_V	Transit depth in V (fraction)	$0.0150^{+0.0019}_{-0.0018}$
τ	Ingress/egress transit duration (days)	$0.0306^{+0.0045}_{-0.0042}$
T_{14}	Total transit duration (days)	$0.312^{+0.030}_{-0.035}$

Table 1 continued on next page

Table 1 (*continued*)

Parameter	Units	Values
T_{FWHM} ..	FWHM transit duration (days)	$0.280^{+0.029}_{-0.032}$
b	Transit Impact parameter	$0.21^{+0.20}_{-0.15}$
$\delta_{S,2.5\mu m}$..	Blackbody eclipse depth at $2.5\mu m$ (ppm)	45 ± 13
$\delta_{S,5.0\mu m}$..	Blackbody eclipse depth at $5.0\mu m$ (ppm)	377^{+63}_{-64}
$\delta_{S,7.5\mu m}$..	Blackbody eclipse depth at $7.5\mu m$ (ppm)	695 ± 99
ρ_P	Density ⁴ (cgs)	$0.114^{+0.26}_{-0.027}$
$log g_P$	Surface gravity ⁴	$2.567^{+0.46}_{-0.080}$
Θ	Safronov Number	$0.0529^{+0.081}_{-0.0057}$
$\langle F \rangle$	Incident Flux (10^9 erg s $^{-1}$ cm $^{-2}$)	$0.170^{+0.032}_{-0.030}$
T_P	Time of Periastron (BJD _{TDB})	$2455388.402^{+0.023}_{-0.026}$
T_S	Time of eclipse (BJD _{TDB})	$2455395.003^{+0.023}_{-0.026}$
T_A	Time of Ascending Node (BJD _{TDB})	$2455398.303^{+0.023}_{-0.026}$
T_D	Time of Descending Node (BJD _{TDB})	$2455391.703^{+0.023}_{-0.026}$
V_c/V_e	1.00
$M_P \sin i$..	Minimum mass ⁴ (M_J)	$0.404^{+0.46}_{-0.027}$
M_P/M_* ..	Mass ratio ⁴	$0.000384^{+0.00045}_{-0.000032}$
d/R_* ..	Separation at mid transit	$14.3^{+2.1}_{-1.3}$
P_T	A priori non-grazing transit prob	$0.0630^{+0.0065}_{-0.0083}$
$P_{T,G}$	A priori transit prob	$0.0772^{+0.0076}_{-0.0099}$
Wavelength Parameters:		
u_1	linear limb-darkening coeff	$0.425^{+0.058}_{-0.060}$
u_2	quadratic limb-darkening coeff	$0.216^{+0.053}_{-0.052}$
I V		
Transit Parameters:		
σ^2	Added Variance	$0.0001109^{+0.0000026}_{-0.0000025}$
F_0	Baseline flux	1.00014 ± 0.00016
OGLE UT 2010-07-10 (I) OGLE UT 2010-07-10 (V)		

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