We present the prospects of observing extrasolar planets with the Stratospheric Observatory for Infrared Astronomy (SOFIA). Our analysis shows that optical and near-infrared photometric and spectrophotometric follow-up observations during planetary transits and eclipses will be feasible with SOFIA’s instrumentation, especially with the HIPO-FLITECAM optical/NIR instruments. SOFIA has unique advantages in comparison to ground- and space-based observatories in this field of research that will be outlined.