Let $H(t) = -\Delta + V(t,x)$ be a time-dependent Schrödinger operator on $L^2(\mathbf{R}^3)$. We assume that $V(t,x)$ is 2π-periodic in time and decays sufficiently rapidly in space. Let $U(t,0)$ be the associated propagator. For u_0 belonging to the continuous spectral subspace of $L^2(\mathbf{R}^3)$ for the Floquet operator $U(2\pi,0)$, we study the behavior of $U(t,0)u_0$ as $t \to \infty$ in the topology of x-weighted spaces, in the form of asymptotic expansions. Generically the leading term is $t^{-3/2}B_1u_0$. Here B_1 is a finite rank operator mapping functions of x to functions of t and x, periodic in t. If $n \in \mathbf{Z}$ is an eigenvalue, or a threshold resonance of the corresponding Floquet Hamiltonian $-i\delta_t + H(t)$, the leading behavior is $t^{-1/2}B_0u_0$. The point spectral subspace for $U(2\pi,0)$ is finite dimesional. If $U(2\pi,0)\phi_j = e^{-i2\pi\lambda_j}\phi_j$, then $U(t,0)\phi_j$ represents a quasi-periodic solution.