Consider a parabolic stochastic PDE of the form
\[ \partial_t u = \frac{1}{2} \Delta u + \sigma(u) \eta, \]
where \( u = u(t, x) \) for \( t \geq 0 \) and \( x \in \mathbb{R}^d \), \( \sigma : \mathbb{R} \to \mathbb{R} \) is Lipschitz continuous and non random, and \( \eta \) is a centered Gaussian noise that is white in time and colored in space, with a possibly-signed homogeneous spatial correlation function \( f \). If, in addition, \( u(0) \equiv 1 \), then we prove that, under a mild decay condition on \( f \), the process \( x \mapsto u(t, x) \) is stationary and ergodic at all times \( t > 0 \). It has been argued that, when coupled with moment estimates, spatial ergodicity of \( u \) teaches us about the intermittent nature of the solution to such SPDEs (Bertini and Cancrini, 1995; Khoshnevisan, 2014). Our results provide rigorous justification of such discussions. The proof rests on novel facts about functions of positive type, and a Poincare-type inequality for the occupation measure of SPDEs. (Received June 28, 2019)