Requiring the partition function to be modular invariant, gives some properties to $\epsilon(\alpha, \beta)$.

- Under $\tau \to \tau + 1$
$$\{\alpha, \beta\} \to e^{-i\pi n(\alpha)/8}\{\alpha, \bar{\alpha}\beta\}.$$
This will require $\epsilon(\alpha, \beta) = \varepsilon_\alpha \epsilon(\alpha, \bar{\alpha}\beta)$.
- Under $\tau \to -\frac{1}{\tau}$
$$\{\alpha, \beta\} \to e^{i\pi n(\alpha\cap\beta)/4}\{\beta, \alpha\}.$$
This will require $\epsilon(\alpha, \beta) = \delta_\alpha \delta_\beta \epsilon(\beta, \alpha)\varepsilon_{\alpha\cap\beta}^{-2}$.

In the equations above $\varepsilon_\alpha = e^{-i\pi n(\alpha)/8}$.