

$G_2(4) \pmod{13}$

	blocks	defect	matrix
$G :$	1	1	8×6
	2	0	$65_1 = \chi_2, \varphi_2$
	3	0	$78_1 = \chi_3, \varphi_3$
	4	0	$364_1 = \chi_7, \varphi_7$
	5	0	$364_2 = \chi_8, \varphi_8$
	6	0	$650_1 = \chi_{10}, \varphi_{10}$
	7	0	$819_1 = \chi_{11}, \varphi_{11}$
	8	0	$819_2 = \chi_{12}, \varphi_{12}$
	9	0	$819_3 = \chi_{13}, \varphi_{13}$
	10	0	$819_4 = \chi_{14}, \varphi_{14}$
	11	0	$1300_1 = \chi_{15}, \varphi_{15}$
	12	0	$1365_1 = \chi_{16}, \varphi_{16}$
	13	0	$2925_1 = \chi_{17}, \varphi_{17}$
	14	0	$2925_2 = \chi_{18}, \varphi_{18}$
	15	0	$2925_3 = \chi_{19}, \varphi_{19}$
	16	0	$3276_1 = \chi_{20}, \varphi_{20}$
	17	0	$3276_2 = \chi_{21}, \varphi_{21}$
	18	0	$3276_3 = \chi_{22}, \varphi_{22}$
	19	0	$3276_4 = \chi_{23}, \varphi_{23}$
	20	0	$4095_1 = \chi_{24}, \varphi_{25}$
	21	0	$4095_2 = \chi_{25}, \varphi_{26}$

	blocks	defect	matrix
	22	0	$4095_3 = \chi_{26}, \varphi_{27}$
	23	0	$4095_4 = \chi_{27}, \varphi_{28}$
	24	0	$4160_1 = \chi_{29}, \varphi_{29}$
	25	0	$5460_1 = \chi_{32}, \varphi_{30}$
	$2.G :$	26	1	$8 \times 6$
27		0	$104_1 = \chi_{34}, \varphi_{32}$
28		0	$104_2 = \chi_{35}, \varphi_{33}$
29		0	$364_3 = \chi_{36}, \varphi_{34}$
30		0	$1820_1 = \chi_{41}, \varphi_{39}$
31		0	$1820_2 = \chi_{42}, \varphi_{40}$
32		0	$2184_1 = \chi_{44}, \varphi_{41}$
33		0	$2184_2 = \chi_{45}, \varphi_{42}$
34		0	$3276_5 = \chi_{46}, \varphi_{44}$
35		0	$3744_1 = \chi_{48}, \varphi_{45}$
36		0	$3744_2 = \chi_{49}, \varphi_{46}$
37		0	$3900_1 = \chi_{50}, \varphi_{47}$
38		0	$3900_2 = \chi_{51}, \varphi_{48}$
39		0	$5824_1 = \chi_{53}, \varphi_{49}$
40		0	$5824_2 = \chi_{54}, \varphi_{50}$
41		0	$7488_1 = \chi_{55}, \varphi_{51}$

Block 1:	φ_1	φ_4	φ_5	φ_6	φ_9	φ_{24}	
$1_1 = \chi_1$	1	.	.	.	.	.	$\varphi_1 = 1_1$
$300_1 = \chi_4$	.	1	.	.	.	.	$\varphi_4 = 300_1$
$300_2 = \chi_5$	.	.	1	.	.	.	$\varphi_5 = 300_2$
$350_1 = \chi_6$	1	.	.	1	.	.	$\varphi_6 = 349_1$
$378_1 = \chi_9$	.	.	.	.	1	.	$\varphi_9 = 378_1$
$4096_1 = \chi_{28}$	.	.	.	1	.	1	$\varphi_{24} = 3747_1$
$4725_1 = \chi_{30}$	.	1	1	.	1	1	
$4725_2 = \chi_{31}$	.	1	1	.	1	1	

Block 26:	φ_{31}	φ_{35}	φ_{36}	φ_{37}	φ_{38}	φ_{43}
$12_1 = \chi_{33}$	1	.	.	.	.	.
$560_1 = \chi_{37}$	1	1	.	.	.	.
$1260_1 = \chi_{38}$	.	.	.	.	1	.
$1800_1 = \chi_{39}$	.	1	.	1	.	.
$1800_2 = \chi_{40}$	.	1	.	1	.	.
$2016_1 = \chi_{43}$	.	.	1	1	.	.
$3600_1 = \chi_{47}$	.	.	1	.	.	1
$4096_2 = \chi_{52}$	.	.	.	.	1	1

$$\begin{aligned} \varphi_{31} &= 12_1 \\ \varphi_{35} &= 548_1 \\ \varphi_{36} &= 764_1 \\ \varphi_{37} &= 1252_1 \\ \varphi_{38} &= 1260_1 \\ \varphi_{43} &= 2836_1 \end{aligned}$$